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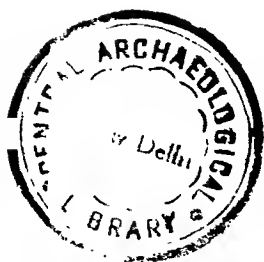
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1:1 ALABASTER FIGURE OF MENKAURA. GIZEH.

ANCIENT EGYPT.

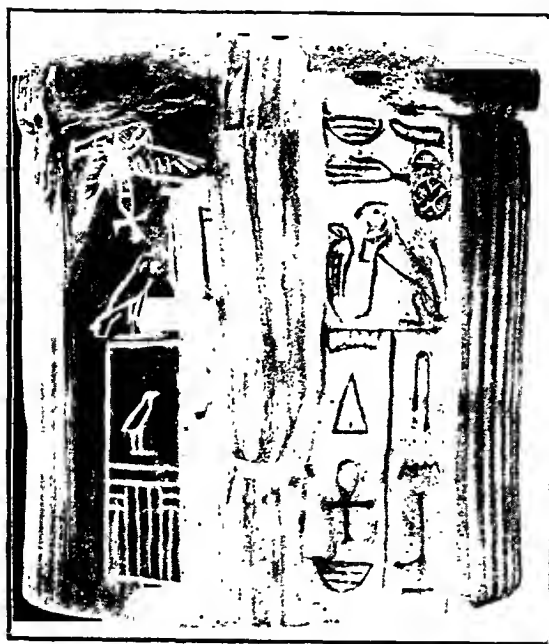
A PORTRAIT OF MENKAURA.

THIS remarkable figure, obtained some time ago for University College, London, is cut in white alabaster, highly polished. It shows a further stage of the idea of the great Khofra statue ; there the king's head is shielded by the falcon's wings, spread out behind the head-dress ; here the king is himself the falcon god, entirely human in front view, entirely bird-like at the back. How the figure was completed below is a difficulty ; the lower part is gone, and the dealer had simply added plaster for a flat base. Was it seated or standing ? It would seem more likely that the figure was seated, and the falcon's tail spread out on the seat behind, leaving the human legs to come forward unaffected. The



resemblance to the *bourgeois* face of Menkaura is obvious at first sight ; and the development of the protecting falcon would accord with this representing the successor of Khofra. Further, on being asked about the source of it, the dealer at once said Gizeh, without apparently any idea of the portraiture. There can hardly be a question that it came from one of the two temples of Menkaura. We know of the dedication of falcon figures in the temple of Sneferu at Meydum (Petrie, *Medum*, xxix, and see xxxiv-v). This is a parallel figure of the king's *ba*, in its guise fit for the heavens.

Another unique object of early date, obtained for University College, is a cylindrical measure with a loop handle, cut in dark green volcanic ash, or durite. It is fluted around the body, probably copied from a reed on a much enlarged scale. On either side of the handle it is inscribed. It is clearly a standard measure of the temple of Hor-behedet, and was stated by the seller to have come from Edfu. On it is a prayer to the hawk-sphinx, "Lord of Edfu give all life and health to the great god Hor . . . u." The finely simple and bold outline of the seated sphinx shows the early date, and it could hardly be assigned elsewhere than to the Old Kingdom. Evidently the Horus name is incomplete; there has been a space left above the chick, apparently owing to indecision on the engraver's part. What names could be intended? The first ending in *u* is *mezedu* Khufu. In the Vth and VIth dynasties most names end in *kho-u*. There is only room for one sign over the *u*, and only for a narrow sign possibly extending down before it.



Sekhem-kho-u Shepses-ka-ra, or *Onkh-kho-ra* Merenra would be possible. There does not seem to be room for *user*, *nefer*, or *neter* before the chick. If, however, any very common signs had been intended, it is difficult to see why the engraver was baulked, and waited for instruction. It is far more likely that it was the unusual sign *mezed*, which was not sufficiently explicit in the hieratic writing to make sure how it should be cut. It seems, then, probable that this is of Khufu, a part of the general ordering and regulation of the country which was his great work.

The contents are 20·8 cubic inches; this was the old Syrian unit, known later by the Greek name of kotula. It is reckoned in metrology as 21 c.i., the middle of the actual Egyptian examples that we have is 20·8, and in the tomb of Hesy of the IIIrd dynasty, the external volume of the measures figured averages 21·1 cubic inches, and, therefore, a little less internally.

W. M. FLINDERS PETRIE.

THE MAGIC SKIN.

A CONTRIBUTION TO THE STUDY OF THE "TEKENU."

[The *Tekenu* is the figure of a man wrapped in a skin, which was drawn on a sledge at the funeral, as represented in the XIIth and XVIIIth dynasties. The discussion of the Egyptian examples will follow in the second part of this paper which here deals with the parallels which may serve to explain the rite.—F.P.]

THE true aim of archaeology is to put life into the dry bones of the facts revealed by excavation and research ; to reconstruct the skeletons of ancient customs and ceremonies from the bones of facts unearthed ; to clothe them with flesh, and so by comparing what we are with what we were, to enable us to appreciate at their true value the possessions, mental, spiritual, and material, which we have inherited, for the benefit of ourselves and posterity. Egyptology has unearthed many such skeletons of rite and ceremony, more or less complete, but the bodies had ceased to live ages before the religious practices had ceased to be performed, and one may well be pessimistic as to whether the ideas and beliefs that underlay them will ever be discovered. But, to use a medical simile, the body of the mass of facts that Egyptologists have at their disposal might well be tested to a greater extent than is yet being done with the serum derived from ethnological research, of which the Golden Bough is a notable example, so that the reactions may be noted, and more concrete knowledge gained thereby of the genera of ideas, beliefs and practices which lay behind. The mass of our ideas about the religion and ceremony of ancient Egypt are as lifeless and stiff as the sculptures and paintings which represent them on the walls of chapel and temple. We may be sure that the *Sa*, or magic fluid, imparted by the touch of priest, king, and god, and by magical implements, like the *ankh*, and *urhekau*, for example, was as real and vivid a reality to the ancient Egyptian as the "medicine" of the African witch-doctor of to-day, known in other verbal guises in various parts of the world as *mana*, *prana*, or *baraka*. "It implies some supersensual influence or power. It is not in itself personal, though it may dwell in persons as well as things. It lives in the song-words of a spell, it secures success in fighting . . . and benefits the one who can employ it in every walk of daily life. It has the range in idea of power, might, influence, and may include spirit energy of character and majesty . . . an immense reserve of potency pervading the world on which man may draw for good or ill. . . . The idea is clearly existent in Indian religious thought and many primitive African beliefs." Similarly : "On the West Coast of Africa [it is believed that] man has within him a kind of life power called *kra* : it existed before his birth . . . It will continue after his death . . . It is behind all the activities of nature . . . It operates in the storm wave, the lightning flash, the strength, cunning and lethal characters of lion, leopard, snake, and smallpox. The dead must be appeased with offerings lest he return and injure us . . . Primitive tribes set this energy working on their behalf by pantomimic dances to promote the growth and abundance of plant and animal."¹

¹ Estlin Carpenter, *Comparative Religion* (Home University Library).

At the same time, it may well be true that quite early in Egyptian history, the glow of life had faded out of religious practices : that the rites performed by the tribe had become sacerdotal ceremonies, merely dramatic representations whose meaning was ill- or misunderstood, or even completely lost, the performances being regarded only as mysteries.

It is clear that in primitive society this life essence, *prana* let us call it, was supposed to imbue the sacred person of the totem, whether plant or animal, to which the tribe belonged. "The tribe was of animals as well as men ; the men kangaroos danced and leapt, not to imitate kangaroos, but for natural joy . . . that they were kangaroos, of the Kangaroo Tribe . . . As belief in magic declines, what was once intense desire issuing in the making or being a thing, becomes mere copying of it."¹

Besides this engine-like "pumping up" of *prana* by the kinetic action of the tribal dance, it could be brought into the human body sacramentally on special occasions by the very materialistic and practical method of eating a *prana*-filled body : either the totem animal, or a member of the tribe specially devoted for the purpose. Similarly, it could be imparted to the fields for the benefit of the crops by scattering the chopped fragments or ashes of the burnt body upon them. When the idea of holiness and the concrete belief in the existence of gods materialised (gods still of a very human type), *prana* would similarly be transmitted to them, and the material body of the life devoted for the purpose would come to be regarded as a sacrifice in the ordinary sense of the word.

Now the *prana* with which the sacred body was imbued (the blood being the vehicle as the life stream) would, like the blood, be absorbed by the skin of the sacrifice. The skin so eminently adapted for dramatic usage in dance, rite and ceremony, would thus become an important adjunct to religious performances, and could be used to impart *prana* to the crops by hanging it on a tree or pole, typifying vegetation, or to superintend the growth of the corn as the corn spirit.²

The following are examples of rites performed with the skin as a vestment. At Hierapolis a worshipper knelt on the skin of a sacrificed sheep, drawing the sheep's head and trotters over his own head and shoulders. He prayed as a sheep to the goddess to accept his sacrifice of a sheep.³ Similar, and even more striking in its significance, is a custom observed by Indian Moslem pilgrims at the largest mosque at Baghdad. In fulfilment of a vow on recovery from sickness, a man, stripped to the waist, has a lamb or kid slain over his head, so that the blood flows upon him. He is then wrapped in the skin. "How could the identification of the man with the kid be represented more graphically ?" is Frazer's⁴ comment, and the identification is significant for the purposes of our subject in hand.

The following rite was performed by a Nubian woman at Sohag, Egypt, which the narrator learnt on enquiry was Egyptian. It is a form of the "Zar," and is performed in fulfilment of a vow to a saint in connection with a wish for health and prosperity. The woman, the vower, procures a brown or black ram

¹ Jane Harrison, *Ancient Art and Ritual* (Home University Library), pp. 30, 34, *seq.*

² Ainus practice with bear skin. Jane Harrison, *op. cit.*, p. 90. Prussian Slavs custom at harvest with goat skin. Frazer, *Golden Bough*, i, p. 18.

³ Frazer, *Folklore in the Old Testament*, i, p. 414.

⁴ Frazer, *op. cit.*, i, p. 427.

and feeds it 30 or 40 days. She is then purified with henna and cuts her nails. Henna is applied to the ram's brow against the evil eye. At dawn she and her female assistants, clad in white, bring the ram into a room. A fire is lit in the middle of the room, and, with the aid of her assistants, she rides round the fire eight or nine times, her bare body, apparently, in contact with the ram. As she rides she throws incense on the fire.

A man reputed for sanctity then enters, slays the ram, and goes out. The woman's feet are steeped in the blood, which is also smeared on her hands, brow, head, and breast. The assistants feast on the flesh, and the hoofs are tied to the woman's hair and are afterwards kept by her. Prior to the feast the woman lies on the blood-wet skin of the ram, which the slayer, entering again, had disembowelled and cut up. As she lies, the others cook the meat, and feast.¹

The Hausas of Northern Nigeria, whose religious beliefs and practices are shown to have curious affinities with ancient Carthaginian cults, perform skin rites, of which the following are examples. At the sacrifice to the totem animal and its tree, a black bull or, failing that, a black he-goat, is killed, and the blood smeared on the tree, and led by a channel into a hole at the roots of the tree. The flesh is eaten and the head buried. The chief, who is also chief priest, and four other priests, don the hide in turn. They and the other worshippers dance round the tree, and eat the flesh.

In the worship of the snake totem, a black bull or he-goat was killed, and the blood spilt on the ground for the snake. The meat was eaten by the worshippers, and the priest-king or priestess danced round in the skin still wet with blood. Hag Ali, Tremearne's trusty informer, explained that the skin was worn in order to obtain *baraka* from it.

The king, when his strength fails, is killed and wrapped in the hide of a bull. His successor smears himself with the blood.² This is in the North. In other parts the slain (strangled) king is dragged to his grave in the body of a bull, which has been slain over the new king so that he is drenched with the blood.³

The practice in Ancient Egypt of killing a ram on the festival day of Ammon, and placing the skin on the statue of Ammon, may be fitly mentioned here (Herodotus ii, p. 42). There is reason to believe that the skin of a goat, the ægis of Pallas-Athene, was similarly placed on her statue, and Haj Ali's explanation applies to both cases.

Prana was similarly imparted to the new god-man in the terrible ancient Mexican ritual, after the killing and flaying of the man who had represented the godhead, and been previously and similarly imbued with the divine spirit.⁴

Similarly, priests dressed themselves in the skins of slaves, sacrificed to the Mexican god of fire, and were worshipped as the incarnate god.⁵ These cases are all of the same category as the Hierapolis rite before-mentioned.

Examples have now been given of the use of the mystic skin to impart its powers to crops, men, statues of gods, and deified living men, and one can readily appreciate how, when men's thoughts turned to gods above them, they should have sent them *prana* to fortify and restore them by sacrifice of the *prana*-charged sacred creature, man or beast.

¹ Wakefield, *Cairo Scientific Journal*, V, Feb. 1911.

² Tremearne, *Ban of the Bori*, pp. 33-52.

³ Tremearne, *Hausa Superstitions and Folklore*, p. 104.

⁴ Frazer, *Golden Bough*, p. 220.

⁵ Frazer, *loc. cit.*

The reason for stuffing the skin, and placing the animal in a plough or field of crops, or placing them about the tomb, is also clear enough. The spirit beast imparts his blessing to the fields or mystically ploughs it.

In Transylvania, at Ascensiontide, the village girls dress up the "Death"—a threshed-out sheaf of corn—as a girl, with a broom-stick for arms. The Death is stripped and thrown into the river by boys.

A girl dresses in the discarded clothes and they go through the village in procession, singing the hymn with which they had brought out the Death: "the girl is a resuscitated death."¹ We should rather say that the name Death was a misnomer, through confusion of the dummy victim with its fate. The rite seems closely allied with the Mexican practice above described, the dress playing the part of the skin.

A trace of a magic skin with powers of a diffused kind comes from an ancient Celtic source, the Mabinogion of Wales. In one of the tales, "The Dream of Rhonabwy," the hero enters a ruined hall, and finding rest impossible on the verminous and comfortless straw mattress, eventually lies down on the old yellow calf-skin before the smoking fire on the hearth, "a main privilege was it for anyone that should get upon that hide." There he has a series of wonderful prophetic dreams.

Examples will be next given where the virtue of the skin is of a less diffused kind. If the *prana* is absorbed by several persons at once this will naturally be regarded as a bond of brotherhood, or, rather, the skin could readily be employed with this object. A number of such rites are given by Frazer.² The Scythians made a covenant by treading upon the hide of a slaughtered ox. "They all become one with the animal and with one another: treading the hide is a substitute for wrapping a man completely in it." Pacts were similarly made by walking between the two halves of the body of an animal cut in two. The idea behind this appears to be brotherhood through ritual birth by passage through the body of the animal.

The following example of a ritual rebirth seems to be totemistic.

The Patagonian Indians sometimes, when a child is born, kill a cow or mare, cut open and remove the stomach, and lay the child in the still warm receptacle. The tribe feast on the rest of the animal. A variant of this custom is, to catch a mare or colt, hold it upright with lassoes, split the animal open, extracting the heart, and place the child in the cavity while the body is still quivering. "The motive is to ensure the child becoming a fine horseman in the future. It is a piece of sympathetic magic designed to endow the child with equine properties."³

Although it is not a skin rite, it is clearly legitimate to regard it as embodying the same category of ideas.

An analogous skin rite is performed, before circumcision, by the Kikuyu, who call it being born again, or born of a goat. A goat is killed and a circular piece of the skin is passed over one shoulder and under the arm of the child to be reborn. The other shoulder is similarly treated with the goat's stomach. The mother, or woman acting the part, sits on a hide with the child between her knees; she and the child being bound about, together, with the guts. She groans

¹ Harrison, *op. cit.*, p. 60.

² *Folklore in the Old Testament*, Vol. I, part ii, chap. 1, pp. 391 *seq.*

³ Frazer, *Folklore in the Old Testament*, i, p. 413.

as if in labour, the gut is cut by a woman as though it were the navel string, and the child imitates the cry of a new-born goat.

We can hardly be wrong in assuming that the use of the skin replaced the employment of the body, with all its unsavoury accompaniments, among races practising the skin rite as they became more refined; the latter being besides a much handier way of performing it.

The strip of skin clearly takes the place of the whole hide in the following Galla custom. It is customary for childless couples to adopt children. The real parents relinquish all claim to the child. An ox is killed, the blood smeared on the child's brow, some of the fat is placed upon its neck, and its hands covered with portions of the skin.¹

A further stage of the development of the rebirth rite, from which the sacrificial element is eliminated, is the form practised in India by persons of high rank as an expiation or cleansing from ceremonial impurity. The sufferer has to pass through the golden figure of a woman or cow as though in parturition.² Instead of a cow a vessel in the shape of a lotus (containing in the case reported a consecrated mixture of products from the sacred cow),³ or a large pot representing the womb, is, or was, employed in India as an expiation for caste pollution (*cp.* note below), in which the person was sealed up for a prescribed time.⁴ A tub filled with fat and water, in which a man sat with clenched fists, was similarly employed in India as a purification by simulated re-birth before he could return to his family after being given up as dead: that is, no doubt, after ghost-laying ceremonies had been performed against him in his absence.⁵

A large number of other re-birth performances, more or less graphic, are given by Frazer in this part of the work in question, one of which must be quoted in conclusion of this section, as the development *in excelsis* of the principle, since by means of it, in conjunction with certain sacrifices, a man was supposed thereby to become a god for the time being.⁶

After being sprinkled with water he feigned to be an embryo and was shut up in a hut (the womb). A white robe and black antelope skin typified the inner

¹ Frazer, *op. cit.*, ii, "Jacob and the kidskins," p. 6 *seq.* In this chapter Frazer discusses the affinities of the Kikuyu and the Gallas, regarding the similarity of their usages to those of the Semites. Arguments which go in the direction of indicating that elements of these tribes had their origin on the north-east coast of Africa (and, therefore, were near enough to Arabia to be influenced by Semitic customs, if not of similar origin to the Arabians)—such arguments apply equally to support the suggestion, that such customs may have been adopted from Egypt, or that they developed out of usages common to both, in the distant past.

² Frazer, *op. cit.*, ii, p. 35. It was performed by two Brahmins in the eighteenth century who had defiled themselves by going to England. The passing through the body of a colossal cow was performed as recently as 1894 by the Maharajah of Travancore, in accordance with custom, to attain high caste by rebirth: the family being by birth low caste (*l.c.*).

Cp. Herodotos, ii, p. 129. Mycerinus' daughter entombed in the figure of a cow. The object, however, was rather that of the Galla and Kikuyu practice detailed above.

³ Frazer, *op. cit.*, ii, p. 37. Used by Maharajah of Travancore in 1854.

⁴ Frazer, *op. cit.*, p. 37.

That the rite with the cow figure is a refinement of a practice similar to the Patagonian, Kikuyu, and Galla is rendered probable by the fact that for fancied or real pollution a child or man in North India is passed, or crawls to and fro, through a real cow's legs (p. 39).

⁵ Frazer, *op. cit.*, p. 31, where this interesting rite is given more fully. Rites of rebirth were celebrated in ancient Greece with the same object.

⁶ Frazer, *op. cit.*, p. 32. It is called the *diksha* (*v.* also Moret, *Mystères*).

and outer membranes respectively, and a belt the navel-string. He kept his fists clenched, and if he moved it was because a child moved in the womb. "By these observances, besides . . . his natural body, he acquired a new and glorified body with superhuman powers . . . by new birth he became a god."

To summarise our conclusions. Rites are, or were, performed with the skins of animals with the objects of adapting, to human needs, the inherent vital magic force (which we call *prana*) which the animal possesses by virtue of its being a totem or else a sacred animal (probably the latter implies the former), or one specially devoted for sacrificial slaughter. *Prana* is immanent in all things, but the life principle is especially rich in it—a sacred or devoted life eminently so. The blood and skin are vehicles of it, especially convenient to manipulate and apply in any desired direction. Man can benefit the gods by supplying them with it through sacrifice, for the restoration of their energies. Through the skin worn on the body it may be of general benefit to the wearer; it can imbue him with its own divine nature and power, or bind him in brotherhood through it to the persons who are in contact with it at the same time. It can impart its virtue to the spirit of a dead man by contact with the corpse. The benefits of regeneration and purification by virtue of the *prana* can be achieved by simulating physical birth from the body of a sacred animal, or the qualities of an animal can be imparted to a human being by simulated birth from it. This is done by employing the actual body of the animal, or a simulacrum of the animal, with appropriate rites and adjuncts, or a skin of the animal. The same end can be achieved by acting as an embryo in the womb, but, at this stage of development of the rite, the ritual is the potent element, and the same applies to the form of the rite in which a simulacrum of a body is used. At any rate, the materialistic utilisation of *prana* is not evident: if anything, this virtue is drawn down or attracted from the deity by the ritual. Lastly, the effect on a human soul of funerary ceremonial can be counteracted by a rite of rebirth, if the soul in question is, in fact, still in the flesh. Virtually, the man's body is dead and the ceremony is performed to benefit his soul. This is the nearest we get to rites of rebirth performed for the benefit of a deceased person, from the evidence above laid before the reader.

ERNEST THOMAS.

(*To be continued.*)

CUSTOMS AND SUPERSTITIONS OF THE EGYPTIANS¹ CONNECTED WITH PREGNANCY AND CHILD-BIRTH.

THE Egyptians are as a race eminently conservative. During a period of more than sixty centuries, the essential type has undergone but few changes. They still retain those distinctive traits of physiognomy, and peculiarities of manner and custom, which the united testimony of their monuments and the literature of the past reveal to us as characteristic of their ancestors.

Among the customs which have been handed down and preserved in this way few are more interesting than those which surround the birth of a child. These customs I believe to be identical with those which were observed in ancient times, and so have suffered no material change since the earliest days of Egypt's history, remaining unaltered among all the vicissitudes of fortune which the nation experienced in the course of so many centuries. Though we cannot always trace the origin of each particular custom, and explain the meaning of many practices and observances of to-day, we may safely attribute their obscurity and apparently meaningless character to the fact that they were a part of the primitive religion of the Ancient Egyptians, and have only become inexplicable since the religion itself became obsolete.

Following the natural order, then, I will deal first with pregnancy, giving a brief account of the system of hygiene and general treatment which is relied upon during this period; and will then devote my attention in greater detail to the treatment adopted during confinement, which forms the main subject of my paper. I shall lay stress on the points which have an archaeological interest, and only mention in passing those of a purely medical consequence.

In those places in which the *harem* system is still duly observed in Egypt, or in the houses of the lower middle class, or in those of the country, the male physician has nothing at all to do with the pregnant woman. It is not until her life becomes positively endangered that the physician steps in to treat the case, and even this custom has only sprung up in quite recent times, with the spread of knowledge and increasing belief in the efficacy of medical science. In Cairo and the other towns there are many well-known accoucheurs who have earned a great deal of reputation and they find more than they can do; but in the country, the old prejudices still dominate. Except when a serious case of this kind presents itself, the entire responsibility of the woman through the whole period is undertaken by the midwife. There are at present two orders of midwives. The first order are the graduates of the School of Nurses, and midwives attached to the Government School of Medicine. These are well educated and well taught. They are called *hakimahs*, feminine of *hakim*, which is the popular

¹ The subject of this article was first treated in 1904, and published in the *Records of the Egyptian Government School of Medicine*, Vol. ii. It was almost literally copied by a recent writer on the Copts. The present version of it is written from an antiquarian point of view and not from a medical one.

term of a medical man. It is a misnomer, because they are really no more than ordinary midwives. The second order of midwives are the traditional ones, that keep up the old state of things. They usually learn their art from their mothers, and old relatives, practise it on some women in their neighbourhood, and then, before they can be recognised by the Government, they pass a most perfunctory sort of examination in order to obtain a licence. They usually come from the lowest classes, and in the country, of both Upper and Lower Egypt, they reign supreme.

We hear of the midwives of Egypt in Exodus i, when they were asked by Pharaoh to kill all male children of the Israelites. The name given to them is in the Coptic version called *ⲫⲉⲓⲛⲉⲥⲓⲟ*, from the verb *ⲉⲛⲉⲥⲓⲟ*, to deliver. The common term in Arabic for the ordinary accoucheuse of the second order is *دایه*, *dāyah*. The classical term is *قابله*, *qabl'ah*.

The Egyptians hold a strong belief about the changes which take place in the nervous system of the pregnant woman, and their effects upon the unborn child. The health and appearance of the coming offspring is thought to depend upon the objects with which the woman is brought into contact before delivery, especially during her first three months. The sight of a beautiful face, which has been habitually looked at by the woman, goes far to guarantee the birth of a comely child ; and any object for which the mother has shown a fondness before delivery tends to be reproduced in shape or form upon her child's body. A woman who had had a longing for apples during her first three months, and was unable to get them, was said to have given birth to a child with a growth of a reddish colour, not unlike an apple. In a second case, a woman who had trained an ape during her pregnancy, was said to have been delivered of a child of an ape-like appearance. A similar belief may perhaps be traced back amongst the Jewish nation by a reference to the similar occurrences recorded in Genesis xxx, 38, 40, 41, and xxxi, 10. Thus the custom has formulated the law that "all pregnant women should live comfortably, and should have what they long for." In this way has arisen the practice of giving to a woman any kind of food or drink that she demands during her period of pregnancy, in order to avoid the risk of reproducing the shape of the desired object upon her infant's body. I have known ladies of good position who during their whole period of pregnancy carried about with them the picture of a beautiful child, at which they were constantly looking, believing that this practice would ensure the reproduction of similar features in their own offspring. This belief is not a peculiarity of the Egyptian nation. Certain cases of barrenness among women are not attributed to any disease, or physical defect in the generative organs of the female ; hence it is considered absurd to consult a physician in such cases. The causes are to be sought elsewhere. Certain kinds of coins, particularly the ancient coins, whether Roman or Greek, in fact any gold jewel that is made of what they call Venetian gold, or 24 carat gold, if worn by a female on a visit to a friend in confinement are supposed to stop impregnation. The same effect is produced on the confined woman if the visitor should chance to see a funeral or dead body on her way to her friend's house, or have about her any old relic, as ancient Pharaonic amulets, or have been herself recently confined. In all these cases barrenness results. Such condition, when it arises, is not, of course, to be treated by ordinary human methods, but must be assailed by remedies of the same nature as the objects which caused it. Relics and coins similar to those which caused the mischief,

if possible the same ones, must be taken and soaked in water for a certain length of time, usually twenty-four hours ; the infusion thus produced is to be drunk by the patient. If the cause were the sight of a funeral or a dead body, then the woman who has been thus affected by her friend has to visit the cemeteries or mortuaries and step across dead bodies or parts of corpses. They often request special permission to visit the dissecting rooms of the School of Medicine.

This superstition is called in Arabic *مشاهدة*, and a woman thus affected is spoken of as *متشاهدة*. The origin of this word is rather difficult to find out.

The word comes from *شهر*, a month, and, unless I am not much mistaken, must refer to the monthly periods of a woman. The whole superstition, in fact, is based on the idea that if a woman is losing face, another who is confined causes her the harm. The superstition is absolutely indigenous, and I have looked for it or any traces of it amongst the neighbouring nations of Syria, Palestine, or the Sudan, in vain. In the dictionaries of the Arabic language the word *meshahrah* does not possess this sense.

Charms and amulets are prescribed for the same reason by old women of experience, and are obediently worn by those who consult them. A pregnant woman may also be injured by the smell of any pungent substance, such as lime in process of slaking, carbolic acid, assafoetida, garlic roasted in butter, and so on. These same odours are supposed to be obnoxious to any open wound, and when infection takes place in any wound the cause is at once put down to the fact that the wound "has smelt."

Just as in the ancient times people were very curious to know the sex of the coming offspring, so do they nowadays adopt almost exactly the same methods as described in the ancient Medical papyri, such as Ebers Papyrus, the Berlin, the Magical Papyrus of London and Leyden, etc. The methods are so similar that I need not repeat them here.

As soon as the first pains of delivery are felt the midwife arrives, and brings with her the chair on which the pregnant woman is to sit while she is in labour. This chair is a sort of stool, with the seat hollowed out from the front in the form of a half-circle. Two upright rods are fixed, one at each corner of the front edge of the seat, and these act as supports for the woman to grasp when she bears down during the second stage of labour. These chairs are sometimes decorated, and they differ in their make according to the position of the family. Unfortunately, they are disappearing quickly in Cairo and other central towns in Egypt with the advance of modern methods of medicine, but in the country they are still very usual. This method of delivery is extremely ancient, and we find it adopted in exactly the same manner since at least the XVIIIth dynasty. It is common amongst many half-civilised people in Africa and elsewhere.¹

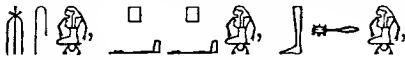
The Egyptian monuments do not, unfortunately, speak of any ordinary cases of delivery, but of the miraculous ones there are many instances. In the story written in the Westcar papyrus² the birth of the first three kings of the Vth dynasty is described. Also in the series of inscriptions and pictures at Deir

¹ Larrey, *Description de l'Égypte*, Vol. xiii, p. 213.

² Erman, *Die Märchen des Papyrus Westcar*, Plate X, p. 7 ; Plate XI, l. 3, pp. 62-65 ; Maspero, *Contes populaires* (4th Ed.), p. 38.



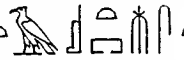
El Bahri,¹ at Luxor,² which depict the birth of Hatshopsitou and Amenhotep III, both directly descended from Amon himself. Also certain pictures of the Late Period depict the birth of the Sun or other deities. From these documents one can gain the knowledge of certain data which are precise enough, and which enlighten us greatly about the ordinary methods of accouchements. The other data found in the Medical Papyri³ and the Magical ones⁴ contain a great deal for our instruction.

In the earliest times the chair had not yet, apparently, been in use. One can easily suspect this, as M. Jéquier says,⁵ from the determinative of the words



that all signify "deliver, to give birth." The woman must have sat upon the ground on her feet and the helping women around her.

The use of the chair, however, must have been very early, and its development and evolution is described by M. Jéquier in the *Bulletin*, T. XIX, 1921, p. 39.

Apparently the word for this chair was , which was the most commonly used. There were other words, however, for it, viz.: . In Coptic it was called *ⲧⲉⲙⲓⲥⲓ*, and, according to M. Jéquier, this word must come from an ancient word like * , which has not yet been found. In Hebrew one finds the word *אֲבִיבִים* (sing *אֲבִיב*).⁶

As a rule the midwife never interferes with the progress of affairs, and leaves nature to accomplish its work. She simply sits squatting in front of her patient and invokes the aid of all the saints of which she knows, that they may intervene and facilitate the labour. *يا ستي كحله انتعينا من دى الوحله*, "Y3 s'tt'y Kahl^{ah} 3nta'yn3 min dy 3l wah^{ah}." "O Lady Kahla, deliver us from this difficulty." While the patient is uttering cries and shrieks in the severity of her pains, all the members of her family sit round sympathising with her in her suffering. When the child is born the patient is transferred to her bed.

If the course of labour, however, be prolonged in any way, by weakness or any other cause, hot stimulant drugs are administered, which are mostly decoctions of cinnamon or crocus. So was it in the olden times, treatment was applied in the form of external application to the lower part of the abdomen or internally in the form of injections, or ovules to be introduced in the patient. All sorts of

¹ Naville, *Deir El Bahari*, Plates XLVI-LV.

² Gayet, *Le Temple de Luxor*, Plates LXVI-LXVII; Champollion, *Monuments*, Plates CCCXI-CCCXLI; Lepsius, *Denkmäler*, iii, Plates LXXIV-LXXV.

³ Pap. Med. de Kahoun; Griffith, *The Petrie Papyri*, Plates V, VI, pp. 7-11; Pap. Ebers, Plate XCIII, XCIV (cf. the translation of Joachim, Papyrus Ebers, pp. 169-173); Pap. Med., No. 3038 of Berlin, etc., see the *Bulletin de l'Institut Français*, T. XIX, 1921, p. 37 seq.

⁴ Brugsch, *Recueil de Mon. Egyptien*; Griffith, *The Petrie Papyri*, etc.

⁵ *Bulletin*, op. cit.

⁶ Exod. i, 16. The ordinary sense of this word is "potter's wheel." It might be cognate to *אֲבִיב*, "stone" (v. *Bulletin*, op. cit.). See also *Edinburgh Medical Journal*, 1908, September, by Sir Alexander Simpson.

material were used, viz. : salt, honey, onions, oil, incense, mint, wine, even pieces of tortoises and scarabs.¹ Hot drinks were also administered. Just as in olden times medicines and incantations were utilised for diseased breasts and milk, so nowadays the same means are also adopted.

As soon as the child is born the woman is placed in her bed and thus the first night is passed. In the morning the midwife proceeds to perform the operation of "opening the eyes." This is done by raising the child's eyelids and painting the eyelids with a solution of coal-tar قطران, and then sprinkling them with kohl. There are many kinds of kohl, but that used for children is made up by burning incense and almonds or nuts, and collecting the soot that is formed. The soot obtained in this way being very soft is employed as an eyepaint, the constant use of which is supposed to colour the eyes black.

On the third day the woman is subjected to special treatment. Leaves of bitter oranges, dried leaves of *Artemisia maritima santoninica* (Arabic شايح), the fruits of acacia, *Nilotica* (Ar. قرض, قرظ), ⲙⲟⲩⲧ Coptic, ⲙⲟⲩⲧ are boiled together in water, and a decoction is prepared therefrom; with this are administered hot douches, hip baths, and stupes.

The next point to be considered is the diet. A puerperal woman is supposed to be abundantly fed for two purposes, firstly, to compensate for the loss of blood, etc., which she has sustained, and secondly, to fortify her system and assist the secretion of milk for the nourishment of her baby. However poor the woman may be, she has to provide herself with one chicken at least for each of the first three days of her confinement; should she be better off, she is kept almost exclusively to a chicken diet during the first ten or twelve days. Wine is given to nearly every puerperal woman. Another very common but important article of diet is a sort of pudding made with bread cooked in treacle and the seeds of a very common indigenous plant named Helbah. It is the *Trigonella Foenum Graecum*. It is named in Coptic ⲙⲟⲩⲧ,² and is supposed to be called³ ⲙⲟⲩⲧ in ancient Egyptian. It belongs to the group of bitter stomachics, but is reputed to be a nervine tonic, restoring health to the exhausted patient. Another most important drug that is used is made from the powdered root of a certain plant known in Arabic by the name of مغات, "Mugāt." The only name I could find to it in scientific language is the French *Grenadier Sauvage*. It is indigenous to Arabia, and is called in Classical Arabic القلقل. This is usually mixed with other drugs, when it is spoken of as مغات محوج or "compound mughat." *Nigella sativa*, حبة البركة, *Ceratonia siliqua caroube*, الחרوب, cinnamon, cloves, cardamoms, nutmeg, and various other drugs of the aromatic series are often mixed with it. The preparation is made as follows: a quantity of butter is first melted and some crushed nuts are roasted in it, mughat is then mixed with it, and the whole well cooked together; lastly, water is added, sweetened with sugar, and the mixture is then well shaken up and served in cups. Butter may be replaced

¹ Papyrus Ebers, Plate XCIV, L, pp. 4-22.

² Kamal, *Flore Pharaonique*, p. 61, فاموس النباتات الفيروتنيفي.

³ *Ibid.*, p. 61.

with sesame oil or dispensed with altogether. It has the consistency of a jelly of a brownish-yellow colour, with a delicious aromatic odour and taste.

It may be noticed that this preparation is drunk not only by the confined woman, but also by all her visitors. "Mughat," as a decrepit old midwife informed me, "solidifies the liquefied bones of a puerperal woman." A decoction of hot caraway *كراوية* is also very commonly used.

A third preparation which is given to puerperal women is known as the *Hālāwāh Mefattaqah* حلالة مفتقة, or the "composite sweets." It consists of the powdered extract of forty kinds of odoriferous plants, mostly of the species of the bitter stomachics. I shall make the study of these forty drugs the subject of a special paper. These are roasted in sesame oil (*سيرج* *sirig*), treacle or honey is poured over them liberally, and the whole is eaten with the greatest relish. Women of experience have to be called in to prepare this dish, for it requires great skill to obtain the correct flavour which makes it so rich and delicious. When made with black treacle it is of a dark greenish-black colour and very thick, and of a rich and agreeable taste.

This *halawah* or electuary is usually eaten with a specially-made pastry called *kumagah* كُمَاجَة, which is made into round loaves about five inches in diameter, ornamented in the circumference, and painted over with a layer of honey and sesame. The dough is kneaded with butter (*سمن*) (or oil *سيرج*, if the patient be a Copt and the puerperum occur in a fasting season).

The *halawah* and *kumagah*¹ are usually distributed in small quantities to friends and near relatives, and are highly appreciated. Chicken, specially prepared with milk and flour (*كشك*), *kishk*² sauce, are also eaten. Before closing this part of the subject it may be mentioned that it is customary among the Copts to give to a confined woman large quantities of wine to drink, a stimulating treatment which may sometimes be most useful.

We now come to the seventh night after delivery, or the *Lēlet-el Subūc*, ليلة السبوع. To call it the seventh night is really literally not true, because the fête is never really held on the seventh day, except very rarely. Most often it is adjourned to the tenth, fifteenth, or even to the fortieth day. Among the rich, especially those who have few children, this night is kept as a great festival; a splendid banquet is served, musicians are hired, and the occasion resembles a wedding feast. But what chiefly concerns us is the treatment which the mother and babe receive at the hands of the midwife. The seventh night is the first occasion on which the child is given a bath, unless he be the offspring of syphilitic parents, in which case he is not touched with water until the end of his first year. The water in which the child is washed is not to be thrown away, but is kept in a glazed earthenware pot, *ماجور أخضر*. If the child is not washed, the pot

¹ This word does not exist in the Arabic dictionaries. It has an absolutely Coptic or Greek look about it, and may come from an original **KOMOXE*, **KOTUAAOTÉ*, or *Kovμεγα* ? ? I have never met with it.


² The plate, chicken with *kishk*, is so highly favoured that it goes as a saying, in speaking of a conceited person, that he thinks of himself as a "chicken with *kishk*," *فرخة بكشك*.

is filled with water in which a piece of soap is lathered. In the centre of the pot is placed an *abriq*, أبريق (a washing pot, a big copper vessel commonly used for washing the hands), if the infant is a boy, or a *qullah*,¹ قلة (the ordinary vessel for drinking water) if it be a girl. In either case the vessel in question is decorated with the usual insignia of the respective sexes. Thus the *abriq* is adorned with a turban and watch and chain, and the *qullah* with a headkerchief, earrings, and so on. Round the rim of the pot are stuck three candles,² which are lighted simultaneously. The parents and friends choose three names, and each candle stands for a name. At the end of the evening the candle which burns longest gives its name to the newborn child. This custom may be traced to an ancient Egyptian mythological origin. The seven *Hat-hors*³ that were supposed to be present at the birth of children may be the origin of the seven candles.

On the same night the midwife provides herself with small quantities of corn and cereals of every kind, wheat, maize, peas, beans, lentils, and others, and places a portion of each, together with some nuts, in the pot. Another portion is stuffed into a small pillow, with the help of the instrument with which the cord is severed, and on this pillow the child must sleep until he has grown old enough to distinguish his own name. This is purely magical to protect the child from the evil spirits and to prevent his being exchanged by some evil spirit for a measly, feeble baby.⁴ A third portion is tied up in a piece of cloth and placed under the pillow on which the mother rests her head.

In the morning of the eighth day the child is taken from his bed and placed in a large sieve (غربلي), and shaken just as wheat is sifted in order to remove the dust and pebbles from it. (See *Ancient Egypt*, 1915, p. 88.) A large brass pestle and mortar are then placed by the child's head, and the midwife takes the pestle in her hand and makes with it a loud ringing sound as if she were crushing something in the mortar. As she makes this noise she mutters a sentence in the ear of the child: "Hear thy father's orders," says the midwife, wielding the pestle vigorously. "Follow thy mother's advice," she continues, and the mortar rings again under her blows. Then the mother is directed to step three times over her child as he lies in the sieve.

The *abriq* or *qullah* is next taken out of the pot, and the water found in the latter is sprinkled over the threshold of the room. Sometimes a boiled egg is placed in the pot and is given to the oldest person to eat. Each of the guests tries to snatch some of the nuts in the pot, giving in return a piece of money to the midwife, and places what she has captured in her purse for luck. A very interesting procession then follows. All the children in the house are gathered together, holding in their hands lighted candles. In front of the procession walks the midwife, holding the child to her bosom, and carrying a quantity of cereals and common salt in a piece of cloth. The procession starts from the room in

¹ The word قلة is the Coptic word $\chi\lambda\omicron\alpha$, $\bar{\kappa}\alpha\alpha\epsilon$, Egyptian  and has passed into Arabic unchanged.

² The original number of candles was seven, and in certain parts of the country it is still so; but through Christian influence it has become three.

³ Maspero, *Contes populaires Le Prince Prédestiné*.

⁴ Marasmatic children, particularly those who are congenitally specific, are believed by a certain class of the population to have been changed by the spirits, مبدول.

which the birth took place. All the company chant in quaint Arabic the following rhyme :—

بداياتك ورجلتك حلقه ذهب من وداناتك
تغيش وترني ولاداتك

“ With thy hands and thy feet, a golden ring in thine ears, mayst thou live and rear thy offspring.” This hymn is, of course, addressed to the infant child. In this way the procession visits every room in the building, and the midwife sprinkles the grains in every room. When the round is completed the child is returned to the mother, and so ends the ceremony.

So far there is no difference in the adoption of these customs between Christians and Mohammedan Egyptians, and except for occasional mention of the names of saints, and the use of certain Christian names, one cannot tell the difference. There is no doubt whatever that the Mohammedans adopted those customs from the Copts.

Circumcision amongst the Copts in Upper Egypt is common, but never in Cairo or large cities. Amongst Mohammedans it is the rule.

Baptism follows on the twentieth day for boys and the fortieth for girls, according to the canons of the Church, but it is often delayed through negligence.

DR. GEO. P. G. SOBHY,
Late Senior Assistant Professor of Anatomy,
School of Medicine ; Physician, Kasr El
Ainy Hospital ; Lecturer in Medicine, School
of Medicine.

REVIEWS.

[The following work by the great Czech scholar appeared at the beginning of the war, and was left unnoticed in England, but should be recorded.]


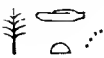
Das Getreide im alten Babylonien. By DR. FRIEDRICH HROZNÝ. Part I, pp. 216. 1914. (Vienna.)

Thanks to Dr. Hrozný's brilliant researches, our knowledge of cereal conditions in Babylonia has passed beyond guesswork. From Aramaic annotations on cuneiform tablets we knew, indeed, that the ideograms ŠE·BAR and ŠE·PAT, which occurred in later times, stood for barley. Such was the abyss of ignorance, however, that even an absurd suggestion found support that the ideogram GÚGAL might mean maize, though maize is known to be of American origin. This ignorance was all the more deplorable since ancient Babylonia has been considered by many to be the home of the cultivation of grain. The importance of agriculture in Babylonia is manifest from the mass of Babylonian records which are concerned with the revenue and expenditure of temples and palaces and with taxes and leases. Whilst silver was used as currency for purchases by the Babylonians, yet taxes, rents and wages were mainly paid in field produce, particularly in the older periods, hence the frequent mention of varieties of grain in cuneiform texts. (In this connection it is interesting to note that, in spite of statements to the contrary, the stage of pure commerce in kind cannot be confirmed by the cuneiform texts, as the oldest documents mention silver and copper as payment media.) The numerous finds of grain in Egyptian excavations have contributed most to the solution of the problem of what kinds of grain were cultivated in Egypt. In such departments of archaeology, Assyriology is far behind Egyptology, and even these finds date to the latest period, and have not been investigated botanically. The author appeals to all explorers to pay heed to the vegetable remains in graves, store-houses, clay bricks, etc., as being of equal importance with records and monuments. He also directs attention to the varieties now cultivated or growing wild in the Euphrates land, and quotes Glaser, who brought back some ears of grain from South Arabia, which enabled Kornicke to identify it as Emmer. Dr. Hrozný sets out to ascertain which kinds of grain were cultivated by the ancient Babylonians (Sumerians and Akkadians), and Assyrians, also the relative importance of these grains and their utilisation. Furthermore, he surveys the cereal conditions of the whole ancient East in connection with those of Babylonia, and discusses, with all due caution, the problem of the home of the varieties of grain from the Assyriological standpoint. The second portion of this (the first) volume concerns the numerous cereal products of Babylonia (flours, beers, etc.), the names of which have not been translated hitherto by those working on the inscriptions. The results of these researches are embodied in a glossary, in which for the time being, at any rate, numerous queries have to be inserted. There is also an appendix by Dr. Frimmel on the identification of seeds, and the chemico-botanical methods utilised in the examination of carbonised specimens. Dr. Hrozný's preliminary work was published in

the *Anzeiger der phil. hist. Klasse d. Kais. Akademie der Wissenschaften* (1909, No. 6; 1910, Nos. 5 and 26), and his interpretations were accepted in the main by his fellow experts. Confirmation of his conclusion that the ideogram GIG = wheat was given by the Clay Inscription: Business Documents of Murashui Sons, of Nippur, dated in the reign of Darius II (Univ. of Penns., *The Museum*, Publ. of the Babyl. Section II/1, 1912), No. 69, where the ideogram *še* GIG·BA (identical with GIG) is rendered in an Aramaic marginal note by the Aramaic (?) word for wheat.

Dr. Hrozný shows that next in importance in Babylonia after barley was ZIZ or ZIZ·A·AN, which he identifies with Emmer (*Triticum dicoccum* Schr.) by the presence of the Akkadian (Semitic-Babylonian) annotation *kunāšū*, with which he juxtaposes the Aramaic *kunnāthā*. Hitherto, *kunnāthā* has been rendered as Spelt, but he shows that the true rendering is Emmer.

Emmer (*Triticum dicoccum* Schr.) is an ancient variety of wheat, now but little cultivated. It differs from wheat (*Triticum vulgare*) in that the grains are not freed from the glumes by threshing, but require a "dressing" process at the mill before milling. It is still cultivated in Southern Germany, Switzerland, Belgium, France, Spain, Italy, Southern Hungary, Serbia, Greece and Russia. It was cultivated in Neolithic times in Europe, and by the Greeks and Romans; also cultivated in the ancient East, in Asia Minor, Persia, Egypt, Palestine and Syria, Babylonia, Arabia and Abyssinia, but was unknown in ancient India and China. The later supremacy of wheat may be explicable by ethnological movements. Some remains of the once widely-spread culture of Emmer remain in the East to this day. This variety is still cultivated in Abyssinia, Southern Arabia, Luristan (Persia) and Egypt. In conjunction with the circumstance that Spelt has not yet been proved with certainty in the East, the fact of the present cultivation of Emmer shows that we are right in recognising the ancient Eastern grain as Emmer, not Spelt. It is also very important that Aaronsohn, the director of the Jewish Agricultural Experimental Station at Haifa, found wild Emmer (*T. dicoccum* var. *dicoccoides* Asch. and Gr.) in Palestine and Syria, generally in conjunction with wild barley.

In Egypt, three kinds of grain are mentioned throughout the entire literature from the earliest times. Their identification is possible by means of the numerous prehistoric finds and from the Coptic names. In the first place, barley was cultivated. Hitherto, there is archaeological proof only of six-rowed barley and of four-rowed barley. The Egyptians called barley , *at*; white, red, and black barley were differentiated. *Šrt* (white and black), from which cakes and also beer were prepared, also seems to be barley. As in Babylonia, the second place in ancient Egyptian cereals was taken by Emmer (*T. dicoccum* Schr. var. *triccum* Schübl.). The old Egyptian name is , *bdt*, Coptic ⲃⲟⲩⲉ.

This word has been consistently translated as Spelt, but it should certainly be rendered as Emmer, in view of the numerous archaeological finds of Emmer and of the complete absence of Spelt. Herodotos proves the importance in Egypt of *ἄλυσρα*, or *ζεαί*, which, according to archaeological finds, can only be Emmer. White, red and black *bdt* were differentiated. In distinction to barley the Upper Egyptian corn, Emmer was called Lower Egyptian corn. Schweinfurth

places the introduction of barley and Emmer into Egypt in the V-VIth millennium B.C., as Legrain found these grains with contracted burials at Silsileh without trace of copper or bronze. In addition, wheat has been found in Egyptian graves (*Triticum durum* Desf. and *Triticum turgidum* L.). The Egyptian name was

—  , *swt*, Coptic *coro*. Red and white *swt* were differentiated.

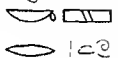
In Ptolemaic times *δλυρα* (Emmer) receded further and further into the background and, owing to Greek influence, its place was taken by *πυρός*, wheat. Wheat soon took up more than half of Egyptian cultivation; in the second place came barley, *κριθή* to a far smaller extent, and last came *δλυρα*, Emmer. In Imperial Roman times, Emmer was practically suppressed; the papyri and ostraca of this period only mention *πυρός* and *κριθή*. That Emmer was never wholly supplanted in Egypt is proved by the fact that it still occurs there, if but rarely only (var. *triccum* and var. *farrum*?).

The Old Testament shows that the Hebrews cultivated principally wheat and barley; both are named about equally often (30 times). A third grain of ancient Canaan was *kussèmeth*, which is named three times only. The LXX translates this word twice by *δλυρα* and once by *ζέα*. As these Greek words had always been translated as Spelt, *kussèmeth* was also translated in the same way. It has, however, been shown to be Emmer. The new identification rests on the Egyptian finds of Emmer, and on the ascertained fact that the ancient Egyptians cultivated Emmer, not Spelt. This meaning is confirmed by the important find of wild Emmer by Aaronsohn in Palestine and Syria (see above). One of the three passages in which Emmer is mentioned in the Old Testament gives valuable information on Babylonian grain, and furnishes a source for the grain conditions of the Babylonians other than the cuneiform texts. According to Ez. iv, 9, the prophet Ezekiel (who was led into captivity into Babylonia in the time of Nebuchadnezzar II, 604-561 B.C.) was enjoined by Jahveh to put wheat, barley, beans, lentils, millet and Emmer into a vessel and make bread therefrom. From the rarity of the mention of Emmer in the Old Testament, it may be concluded that the Hebrews cultivated this grain to a slight extent only. The case may have been very different in still older times: the "Tale of Sinuhe" records that barley, *at*, and Emmer, *bdt*, grew in the fertile land of Yaa, which was somewhere in Palestine, and which Sinuhe received from the prince 'Ammiensi.

The group of signs ZIZ·A·AN occurs in the name or ideogram of a month *arab* ZIZ·A·AN, which was the name of the eleventh month, corresponding approximately to February in New Babylonian times. The suggestion that *arab* ZIZ·A·AN means "Emmer month" is all the more likely as the ideogram of the following month *arab* ŠE KIN KUD, "harvest month," contains a grain sign (ŠE, corn, barley). It is strange that the Emmer month should precede the harvest month, as Emmer ripens later than barley (Exodus ix, 31 f); possibly the grain was harvested as green corn. Were other proofs wanting, the naming of a month after the grain would alone show the importance of Emmer in the Ancient East. In Egypt, also, a month was apparently called after Emmer:

the month Tybi bore the name   , *šf. bdt*. Erman states that this

word occurs once only, in the calendar of the Ebers Papyrus, as a popular name in place of the later Tybi, meaning probably, "the wheat swells," and certainly not "strength of wheat" (Brugsch).

Not only was Emmer the second most important grain in Egypt and Babylonia alike: in both countries it was called by the same name, which in all probability originated in Babylonia. A strong Babylonian influence on Egyptian agriculture is thus indicated. The Semitic rendering of ZIZ·A·AN was *bu-tu-ut-tun*. Thus *bututtu* must also be Emmer or a product thereof. According to another record, *buṭuttu* was prepared from ZIZ·A·AN (Emmer) by pounding, so that it was probably a half-product between the grain and the flour, most probably the grain freed from chaff. It is very important to find this Babylonian name in the old Egyptian word *bdt*, Coptic ⲃⲟⲩⲉ. The ancient Egyptian *d* corresponds to the Semitic *d* and *t*; the word may well have been pronounced *bōtet*, and would thus be completely identical with the Akkadian *bututtu*. Another instance of the passage of a word from East to West, from Syria (Babylonia ?) to Egypt, may be furnished by the possible derivation of the Egyptian word for Emmer bread which, according to Herodotus, was prepared from ὄλυρα. The name of this bread was , *kršt* or *kłst*; it is not traceable before the time of Seti I. It is tempting to derive it from the Babylonian Aramaic *kunāšu-kunnāthā*; as the Egyptian *n* can correspond to the Semitic *l*, the converse may also hold.

Dr. Hrozný proceeds to show that *kussēmeth*, the Hebrew name for Emmer, is probably also of Babylonian origin (cf. *ku-su-um mi-id-di-tum*), and that the old Aramaic ܟܬܬܐ was probably derived from *šu'u*, an Assyrio-Babylonian name for Emmer. From these derivations, the author concludes that Babylonia was the centre of an ancient cultivation of Emmer, which radiated on all sides. And as Aaronsohn (*vide supra*) found wild Emmer in Syria and Palestine, Dr. Hrozný considers that one is forced to the conclusion that the cultivation of Emmer originated in ancient Nearer Asia, especially in Babylonia. Emphasis must be laid on the fact that Emmer was not cultivated in the eastern parts of Asia. Since the wild form has not been found in Europe, this continent cannot be considered the seat of the first cultivation of Emmer, and in company with the whole Orient, Europe must be considered to be dependent on Babylonia for the culture of the grain.

Emmer is mentioned in the earliest economic documents of Sumeria, which are dated to about 3000 B.C. Schweinfurth places the introduction of barley and Emmer into Egypt about 6000-5000 B.C. The Babylonian culture of Emmer must be at least as ancient, if the Egyptians derived their name *bdt* from Babylonia. There is nothing difficult of acceptance in this theory, since the Sumerian records of numerous kinds of flour, bread and malted beer show a high stage in handling and utilising the grain, resulting from age-long experience.

The unity of the area of cultivation of Emmer in the Ancient East is shown not only by the identity of ancient Eastern names for Emmer, but also by the fact that Emmer was the second most important grain in the Ancient East, particularly in Babylonia and Egypt, ranking next to barley. When wheat took the first or second place, a foreign influence is usually recognisable, as in Egypt, where Emmer was supplanted under the Greeks and Romans, and in Babylonia under the Persian kings. A further proof of the similarity of agricultural conditions in the Ancient East is afforded by Dr. Frimmel's identification of seed from excavations at Nippur as a many-rowed (four-rowed) barley of primitive cultivation, and of seed from excavations at Gezer as wheat, probably *Triticum turgidum*. Both these grains were cultivated in Egypt.

L. B. ELLIS.

Thoth the Hermes of Egypt. By PATRICK BOYLAN. 8vo, 215 pp. 1922. (Milford.) 10s. 6d.

This work is a valuable collection of all mentions of the god Thoth, grouped under his different connections and discussed as to their relations and bearing. The material of the Berlin dictionary has been used, with help from Erman and Junker. The purpose has been to distinguish and explain all the aspects and epithets of the god. The late texts have been freely used because they usually continue or reflect the views of early times. The various aspects of Thoth are classed under sixteen chapters, which seem to be fairly exhaustive of the material. Yet in all this completion there is a lack of new light or synthesis. One does not seem to see any further, or differently, to what was already accepted. There are many twinings around the conflicts of the gods, but no reference (except in a footnote) to the historical aspect of the conflicts as being those of the god's worshippers. Even the Horus and Set combat is never translated as the conquest of one tribe over the other.

The many diverse aspects and attributes of the gods is thought surprising (p. 82), but it was only the reflex of the extreme pluralism of officials, who might hold half-a-dozen high offices which seem quite incompatible. The season of November is referred to, as it is in the north, "when the trees shed their foliage, when Nature was visibly tending to decay," but the opposite is the case in Egypt. One sentence could only have been written in Ireland: "He (Set) is the brother of Osiris because the rivalry of brothers is the most obvious, and the most widely known." In the list of names compounded with that of Thoth, four in Lieblein's dictionary are omitted, and two others (*see* ANCIENT EGYPT, C. 170-I, D. 126). The ape is placed on the stand, not on the tongue of the balance (57). The firm of Holzhausen have done their work excellently, with only three small errata (pp. 22, 148, 212), and the Oxford Press seems to have a branch in Vienna. Why is there no index? Altogether we must heartily welcome a new writer in the English (or Irish) field, who has given us a valuable book, and who we may hope will long increase in strength and production.

The Racial Origins of Jewish Types. By R. N. SALAMAN. 8vo. 22 pp., 12 plates. 1922. (Spottiswoode.)

This address to the Jewish Historical Society breaks new ground, and happily combines history and ethnology. With a biologist's training, Dr. Salaman views the mixed types as ancestral combinations; and a wide range of practice here and in the East has made the varieties familiar to him. Even among the small and extremely exclusive tribe of Samaritans, though mostly dark and sallow, there are some blonde with red hair. The Hebrew origin, from Ur of the Chaldees, was in contact with the round-headed, aquiline Sumerians, here claimed as kin to Hittites, and the long, upright-headed Semite. The Hebrew stock is granted to be the Habiru, who were the Shasu or Bedawyn. The trek round by Haran was familiar to that people. The Aamu figured at Beni Hasan are mixed with the Habiru Bedawy type. The Amorites are accepted as a source of a fair type. The Hittite type is well known—short and thick-set, with large rounded heads, short necks, full, rather puffy faces, with a rounded wide nose; others have a small mouth, refined lips and a sharper nose. The modern Armenian is the representative of the Hittite, with fair skin and dark hair and eyes. Though the earlier faces from Palestine are of Amorite type in 1500 B.C.

as far north as Damascus, by 1300 both Hittite and Amorite appear in North Syria; and rather later three out of four people of Askelon are like Hittites. This agrees with the movement of the Hittites southward, which is recorded.

The Hebrews, then, were a Bedawy tribe settling among an Amorite and Hittite population. In Egypt the mixture would be with the Semitic Hyksos remains on the eastern border. The defeat of the Pulostau by Ramessu III threw them back on the Syrian coast to form Philistia. The total disappearance of the Philistines later in history shows that they were gradually absorbed in the Palestine population, though they left their name, much as the fair Franks have been absorbed by the Gauls. In Zechariah ix, 7, the mixed Philistine is described "as a governor in Judah." It seems agreed by all the evidence that the Philistine was a Cretan, and further, of a northern origin. This is taken to be the source of the fair "pseudo-Gentile" strain, which amounts to a fifth of the modern Jewish people. Though the Armenoid Hittite is the dominant type, yet the other survives, as in modern Greece the Armenoid type has overrun the old fair Heroic type. The summary, finally, is "that the Jews are sprung from an original Semitic Arabian stock, the Habiru (or Khabiri); that they freely mixed with the Amorites, the Hittites and the Philistines, and that of these three races, whilst the first is probably Semitic, the latter two are definitely non-Semitic. The Hittite possessed characters which dominated the others, and as a result the majority of Jews to-day present more or less completely the Hittite or Armenoid type." It might be added that the absorption of the Khazars and other tribes in the last two thousand years continues the same process. It is religion and not ancestry that defines the nation.

A History of Egypt from the Earliest Kings to the XVIth Dynasty.—By W. M. FLINDERS PETRIE. 8vo, 294 pp. 1923. (Methuen). 12s.

This new edition of the *History* has been entirely revised, to include all fresh material down to last autumn. The entirely new parts are in the viith-xth dynasties, where the Syrian dynasties and the Khety kings are put in order; the latest arrangement of the xith dynasty; and the grouping of the Sebekemsaf family as a southern dynasty contemporary with the earlier half of the xiiith dynasty in the north, with a fluctuating frontier between them. This last period was somewhat like that of the xxist dynasty, where the northern kings alone are in the lists, but contemporary with a dynasty of Theban kings. At the end are tables giving the complete hieroglyphic titles of every known king to the end of the xvith dynasty.

Historical Sites in Palestine. By Lieut.-Com. VICTOR L. TRUMPER. Sm. 8vo, 138 pp., 3 maps. 1921. 3s. 6d. (Nile Mission Press, 37, Sharia Manakh, Cairo.)

This handbook is modified from the short hand-lists of places that were supplied to the army when advancing over the country, to give them some idea of the history before them. Short statements of the events connected with each site are given, and 430 sites are identified. The places are grouped geographically, with a very full index. Some reference might be given to the various explorations of places, which would make visitors understand how much importance is attached to the sites. This well supplies the place of a handbook for any traveller who is not going expressly for the sites and history, for which he would need more detail.

L'Architecture, choix de documents. By JEAN CAPART. Sq. 8vo. 1922. (Vromant, Bruxelles.)

This is a very useful collection of 200 plates of architectural subjects from various works, mostly photographic. The facility for study is given by a full bibliography of works referring to the subjects, in 47 pages. Rather more than a quarter of the plates have appeared in Dr. Capart's *Art Egyptien*, of which this volume is one section, expanded to deal more completely with a particular branch. There are also complete references to the text of that work. One subject—a rose-lotus capital, pl. 194—should have been put to the Old Kingdom; it was found beneath the level of Merenptah, and was doubtless re-used from much earlier work. The plates will be mainly of use for teaching in class; but an analytic work, placing together all the examples of one feature at a time, is what is needed for advancing the study of the subject.

Les pastes céramiques i els esmalts blaus de l'antic Egipte. By JOSEP LLORENS I ARTIGAS. 8vo, 57 pp. 1922. (Barcelona.)

This is the result of a mission sent to Paris to study the ancient faience, with a view to its modern reproduction in Spain. For us the value of it lies in the collection of analyses by various chemists. The base of the blue glaze is truly stated to be a siliceous paste, though the influence of a little iron in changing the glaze to green is not noticed. The body materials are:—

	Red pottery.				Hard pottery.				Glazed paste.			
Silica	52	56	81	88	91	90	94		
Alumina	15	19	13	6	6	4	1½		
Lime	24	5	3	3	..	2	1½		
Iron and manganese	2	9	1	..	..	..	2		
Soda	2	..	..	..	..
Magnesia	1	..	..	2	1	2		
Carbonic acid	6	4	..	..	..	..	..
Water	1	6	..	..	..	1	..		
Copper	3	..	2	..		

The two including copper are mixed with the blue glaze. The absence of lead is noted, but lead is essential with iron for the Ptolemaic apple-green. The saline efflorescence seen on glazed ware is attributed to decomposition of the alkalis in the paste; but the least acquaintance with Egyptian remains shows that it comes from salts in the soil, which are very difficult to remove. Several more analyses of the white paste are supplied, but they fall within the variations above noted. Unfortunately the dated specimens are none before the XXth dynasty. If the writer had come on from the Louvre to London, he could have studied the glazes back through the prehistoric, and been supplied with the complete studies of the production of the blue colour by Dr. Russell and Prof. Laurie, who are not even mentioned.

PERIODICALS.

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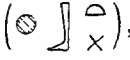
Zeitschrift für Ägyptische Sprache, Vol. LVII, 1922.


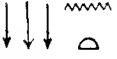

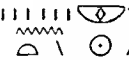
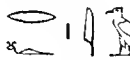
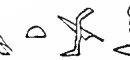
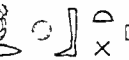

SETHE, K., and colleagues.—*Die Sprüche für das Kennen der Seelen der heiligen Orte*. The whole paper (of which the first portion only is published in this number of the *Zeitschrift*) deals with those chapters of the Book of the Dead which were numbered by Lepsius 107–109, 111–116. These occur together, with a certain regularity, and are sufficiently uniform in title and ending to be called a complete group or collection of texts. In late versions, these chapters are separated only by Chapter 110, “The Fields of the Departed.” Four stages of development may be distinguished in this group of chapters:—(1) no titles; (2) non-funerary titles; (3) funerary titles; (4) the uniform title “knowledge of the souls of . . .,” and it is possible that the texts were not necessarily funerary in origin. The sequence of the texts was a fixed one in the Middle Kingdom, but varied later. The contents of these chapters are divisible into three groups: (1) texts concerning Heliopolis and Hermopolis, and dealing with the sun and the moon; (2) texts relating to Buto and Hieraconpolis; (3) texts concerning the East and the West. Several texts which appear independently in late versions of the Book of the Dead are only variants, and only occur in the first instance when the original texts are missing. The first group only (Chapters 115, 114, 116, and a chapter which disappeared in N.K. versions) is dealt with in this portion of the paper.

An interesting change is traceable in the title of Chapter 116. In Papyrus Ea of the XVIIIth dynasty, the title reads “Another chapter for knowing the souls of Hermopolis,” though Chapter 114, of which it is a variant, is not included. Evidently this papyrus was based on a model which preserved Chapter 114. From XXist dynasty onwards, the title changes to “Another chapter for knowing the souls of Heliopolis,” presumably because in Ea it follows Chapter 115, which deals with *Heliopolis*. In XXIst dynasty, Chapter 114 is included with the correct title (Hermopolis) as an independent text at the end of the collection.


The general title of the collection of chapters reads: “To know what Thoth knows of preservatives,” (2) “to know every sanctuary,” (3) “to be a spirit in the underworld.” There is a clear connection between *rꜥ* of the first two sentences and the “I know” which is common to all the chapters, and with which the speaker affirms his knowledge of the secrets, and which also lies at the root of the refrain “I know the souls of . . .” The sentences, however, contain nothing of a directly funerary nature unless it be *šdꜣw*, which is presumably *nomen actionis* of *swꜣdꜣ*, “to preserve.” The words *r ꜥꜣ nb* show that the title belongs to the whole collection, not to the following chapter only. It is conceivable that the title may have belonged to the collection before the texts concerning the East and the West were included, for these do not refer to a sanctuary, and were probably funerary in character from the outset. Like some of the other titles, this introductory title could be used equally well by a living as by a dead person. The *rꜥ bꜣw* title of Chapter 115 is not preceded by an older title; as the title of the first chapter of the collection, it may possibly have served as a model for the uniform re-naming of the other titles. The final refrain

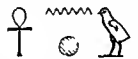
" I know the souls of . . . " has no real connection with the text, unless *b³w* be rendered by an abstract expression such as " mystery," " history," etc., in which case the explanatory sentence " these are Ra, Shu and Tefnut," must be secondary. Moreover, the word " souls " is expressed by the old form of the plural, namely, by a three-fold repetition of the word-sign for *b³*, whereas the explanatory sentence definitely enumerates *three* gods. The inorganic nature of the first refrain is even clearer in the chapter which comes between Chapters 114 and 115. As the chapter deals with embalming, the three gods in this case are gods of the dead, namely, Osiris, Anubis and *Isdís*. The first two are referred to in the text, and from the context cannot be included in the " Souls of the New Moon festival," of whom the visitor claims knowledge, and whom he addresses.

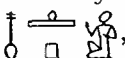
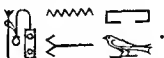
In Chapter 115, the deceased claims admission to the sanctuary of Heliopolis, because he is one of the " eldest " who may gaze on (*wn hr hr*) the sacred eye of the sun god. His object is to restore the damaged eye. He knows the mythological events to which certain institutions owe their origin: firstly, the injury to the sun by eclipse or clouding over, which is represented as a mutilation of the mouth of the sun god; then the attempt of a serpent *Htm* or *Imj-wh'f* to contest with Ra the inheritance of Heliopolis. This attempt gave rise to three Heliopolitan cult institutions: the " Diminution " () the " Thirty " (Spears), and the " Brotherhood " festival. Then follows a meeting of the sun god with a creature called *Imj'imsf* (" he who is in his bandages "), whom Ra outwitted in the form or with the help of a woman " with curls." For this reason, the High Priest of Heliopolis wears a " curl " or " plait " on his bald head, like a woman. He is called first " the pigtailed one," then " the bald one," and, finally, in his character of " heir " and " great one who sees his father," he received the title of *wr-m'w*, which is usually translated as " great one of seers."

This chapter contains two references to injury to the mouth:   , " the decrease in the brotherhood festival " (possibly the feast of the sixth day, ) and    , " his mouth was mutilated and so arose the decrease at the feast of the month." As the sun god's mouth suffered injury, the " decrease " must mean a solar eclipse, even though it is stated to occur regularly at a lunar festival; in this case *'ibd*, which is usually the second day of the month, must be the day of the new moon. In another chapter, the injured part of the sun ($\frac{1}{16}$ of the disc) " belongs to him who counts the parts," *i.e.*, Thoth, who thus functions also in his character of moon god. It seems then that the Egyptians knew that the solar eclipse is caused by the moon. This chapter comes between Chapters 114 and 115 in Old Kingdom MSS., but disappears in the New Kingdom. Once again the deceased seeks admission to a sanctuary. He affirms that he understands healing or embalming, and is able to heal the injury which the eye of the sun suffered on the day of the new moon. The persons from whom he demands entry are " those who are at the New Moon Festival," or the " Souls of the New Moon Festival."

From the New Kingdom onwards there are two versions of the Middle Kingdom chapters dealing with a visit to the temple of Hermopolis, namely, Chapters 114 and 116. This chapter is obscure in certain important details.

Injury has been suffered by certain sacred things in the temple, including the eye of Horus, which Thoth had to find after Set had swallowed it. The speaker claims initiation into all these mysteries, moreover he comes as the emissary of the sun god to remedy the injuries and to hand over the eye of Horus to Thoth, who had "counted" it. One of the injuries is "the pushing of the feather into the shoulder of Osiris"; the verb used in the Middle Kingdom is *twn*, determined by the horn. Sethe suggests a direct connection between this passage and the name of the twenty-seventh day of the moon, , "the pushing of the horns." A further injury is referred to as the "shining of the red crown." After the remedy, the red crown is to be black, as if that were its natural colour. The third injury is the eating of the eye, which is evidently the eye of Horus from analogous passages elsewhere. Possibly the feather and the red crown represented other manifestations of the eye of Horus, which was susceptible of many transformations. The final words of the Middle Kingdom versions of Chapter 114 are: "I know the souls of Hermopolis, that which is small on the second day of the month" (i.e., the new moon), "that which is big on the fifteenth day of the month" (i.e., the full moon), "It is Thoth." In Chapter 116, two gods are added to make up the usual triad; these are *št' sy*, "difficult of recognition," and *rh tm*, "Omniscient." It is possible that these names are epithets of the paraphrases of the moon given above. Chapter 116 is followed by a final clause affirming that knowledge of the chapter ensures against hunger and thirst; it may refer to all the three chapters of the sub-group.

SCHARFF, ALEXANDER.—*Ein Rechnungsbuch des königlichen Hofes aus der 13. Dynastie*. Borchardt and Griffith have worked on this papyrus (Boulaq Papyrus, No. 18). It is dated to the XIIIth dynasty by the mention of a king Sebekhotep and of a Vizier, . The papyrus was found at Dra'abu'n-Negga in 1860. The beginning and a large piece of the middle are missing; the complete document was probably 7½ metres long. It consists of two hand-writings, of which the larger one only is dealt with in this article.

The scribe was called , and he bore the title . His office was at Thebes, where he kept the accounts of the rationing of the Court. These accounts cover periods extending from the twenty-sixth day of the second month of Inundation (Paophi) to the fourth day of the third month (Hathyr) of the same season, and from the sixteenth to the eighteenth day of the same month, in the third year of a King Sebekhotep. It is unfortunate that the daily balance sheets give the total issues without mentioning the number of persons supplied. The scribe received his orders either by word of mouth or in writing. The verbal instructions were transmitted by his chief, direct from the Cabinet of the king, to the effect that "good things" are to be brought to N.N. The nature of the "good things" is not specified, so that presumably the scribe worked to standing instructions. The execution of the commission is entered by the words "done according to this order." The scribe made a copy of his written instructions; his work consisted in reckoning out the respective shares to be issued by the three Administrations of Stores. Certain costly items, such as eye-paint, wine and honey, were, however, actually issued by the scribe himself, as the entries for these invariably begin with the words "taken from the sealed place." The regular daily receipts are called *kw*, whilst the occasional revenues for issue on

feast days, etc., are called 'inw. The latter are tabulated in three columns: (1) amounts due; (2) amounts actually received; and (3) arrears. The daily balance sheets consist of a tabulation of receipts and issues; the balance is carried forward to the next day, and correct working is indicated by the sign $\frac{\dagger}{0}$. The daily recipients are the royal family, the Court officials, and the servants. Among the royal recipients were the king's sisters (wives) and five "households" of king's sisters. Several high officials appear to have received supplies on special occasions only. About seventy persons "were led into the hall to eat" on each of the two festivals of Mentu, and extra stores were booked for these days. In fragments of the papyrus occurs the name of the town of Cusae, which seems to have been the northern boundary of the Theban kingdom in Hyksos times.




SPIEGELBERG, W.—*Ein historisches Datum aus der Zeit des Ptolemaios XI Alexandros*. A demotic stele (No. 110) from the Serapeum of Memphis bears a date at the end, which Spiegelberg translates as follows: "Written in the fifteenth year, which corresponds to the twelfth year, on the sixth of Mechir (?) of Queen Cleopatra and King Ptolemaios surnamed Alexandros, *when he was with the army at Pelusium*." The words in italics need explanation. Spiegelberg is not sure of the reading of the place name; it is undoubtedly identical with the town mentioned in Mag. Pap. I, which Griffith took to be $\pi\epsilon\lambda\upsilon\sigma\iota\upsilon\mu$ = Pelusium. The double dating corresponds to 103–102 B.C., when Cleopatra undertook a campaign against her rebellious son Ptolemaios X, Soter II (Lathyros), which was nominally led by Ptolemaios Alexandros. According to Bouché Leclercq, Pelusium was the base of operations against Syria.







SPIEGELBERG, W.—*Horus als Arzt*. Diodoros (i, 25) relates that Horus practised medicine, like his mother. An unpublished ostrakon in the Strasburg collection (H 111) takes this belief back to Ramesside times. Unfortunately the ostrakon is not complete, but enough remains to show that the inscription consists of a series of statements extolling the healing effects of the *md.w* (spells) and *hk³.w* (magic rites) of Horus.

GUNN, BATTISCOMBE.—"Finger-Numbering" in the Pyramid Texts. In Vol. liv of the *Zeitschrift*, Sethe discusses a rhyme for counting on the fingers which ends the "Spell for obtaining a ferry boat," which was published by Grapow from Middle Kingdom coffins. The initial sentences of the spell are nearly identical with the beginning of Pyr. Spell 359. Then follows the dialogue in which first *M³-h³.f* and later 'Kⁿ delay the "magician" with objections and questions. To the last of these, namely: "This august god will say hast thou brought me a man who cannot number his fingers?" the magician replies by repeating the rhyme in question.






Gunn points out that Pyr. Spell 359, which is also a spell for transportation by *M³-h³.f*, contains an allusion to this matter. The passage in question ends with the words: "This Pepy is in charge (?) of the Eye of Horus which is his own; this Pepy is going to the numbering of fingers." Gunn infers that there is to be a "numbering of fingers" on the other side of the water, in which the deceased king wishes to take part. The motive for the rite remains obscure. It seems to be closely connected with the eye of Horus.

[This may be connected with the quinary system of the assertions of innocence, which was probably learned on the fingers; so the finger numbering may be the school name of the recital of the moral code as repudiation of sins.—F. P.]

WIESMANN, H.—*Die Determinative des sprechenden Mannes und der Buchrolle in den Pyramidentexten*. In the Pyramid texts, words have special determinatives; general determinatives are not used. Thus the sign of the man with his hand to his mouth () and that of the papyrus roll () have a more restricted use than in later times. A list is given of the words in which these determinatives occur and of the number of times they are used. The man with his hand to his mouth is the sign for eating, and occurs in some twenty words, of which nine designate food, or some process of eating. The use of this determinative may be explained by analogy, connection of ideas, or substitution for another human determinative, in all but five of the remaining words. The sign  is used in thirty-four words; it originally designated a book or document and was used for words with these meanings, also for expressions which were usually conceived of as being written, and for legal or ceremonial expressions.

SETHE, K.—*Kurznamen auf j*. To the New Kingdom pet names ending in , discussed in Vol. xlv of the *Zeitschrift*, Sethe now adds several examples from the Old Kingdom. According to ancient usage these end in . The suppressed element is usually the name of a god, king or K^3 , and it would seem that the Egyptians termed the abbreviation "the beautiful name" in distinction to the "big name," as the full name was called. This agrees with the Old Kingdom custom of calling nicknames, such as , , , , which have no etymological origin, by the term "beautiful name."

BISSING, F. W. VON—*Ein Kultbild des Hermes-Thot*. In the author's opinion, the fragment of sculpture dealt with in this article shows Greek influence. It is sculptured in finely-grained yellowish marble, and represents a cynocephalous ape squatting on a pillar and holding a roll in its paws. There is no trace of lettering on the roll. Including plinth, the height is $13\frac{1}{2}$ inches. On the pillar is carved an ibis. The ape bears a disc on its head; from the front of the disc springs an uraeus, with disc and horns. The back of the disc is touched, but not grasped by a carved human hand, which is proportionately large. Ape and ibis clearly point to Thoth; the position of the hand leads Bissing to suppose that the figure to which it belonged was closely akin to the representations of Hermes-Thoth on coins of Roman times from Hermopolis-Eshmuneyn. These coins depict an erect human-headed figure, wearing the crown of an Egyptian god, and holding a crouching ape in the hand; in front is an ibis. Representations of apes reading are extremely rare [see baboon reading, probably Middle Kingdom, Univ. Coll.]: it is doubtful if they occur in the New Kingdom, and they became popular only in Graeco-Roman times. Horapollo (i, 14) relates that there was an Egyptian variety of cynocephalous ape which knew its letters, and that apes which were brought to a temple were given writing materials by the priest to ascertain if they were of this variety. The three manifestations of the god are also found on a limestone tablet of the Roman period, which is divided into three registers. In the middle register, a cynocephalous ape is represented on an altar; it is crowned with disc and crescent and it holds an object on which is perched an ibis. The ape is flanked by Thoth and Harpocrates. The bottom register is divided into three panels: the central one is occupied by a fully-dressed

KEES, H.—*Die Schlangensteine und ihre Beziehungen zu den Reichsheiligtümern*. In the Pyramid Texts, the sign  accompanies the word 'itrty, the name of the royal palaces or national temples of Upper and Lower Egypt. Two of these signs together form the word sign for *šnw·t*. Sethe recognised the mixed word sign   in an incompletely-preserved representation in the temple of Sahura of a god who cannot be identified. He also drew attention to a stele of the form  at Cairo, on which is a snake called "the good 'h' snake of the house of Horus Khenti Khet." Kees maintains that the *šnw·t* was a building in front of which stood two steles shaped like the sign , each of which bore a serpent as a protective deity. On a naos from Saft el Henna, such stones are called "gate-keepers," and there is some support for the view that such stones were placed at entrances for protection. There are also indications that the use of snake stones belongs to a religion older than the cult of Heliopolis. In old texts, Min was connected with the *šnw·t*, as well as Ra. The word *šnw·t* occurs in an Old Kingdom title *šmšw šnw·t*, which is usually rendered "Elder of the pillared hall."

(To be continued.)

Man. November, 1921.

New Light on the Early History of Bronze.—Prof. A. H. SAYCE. A tablet of Sargon of Akkad describes the size of the provinces of his kingdom, and their distance from the capital. The summing up is that his rule extended "from the lands of the setting sun to the lands of the rising sun, namely, to the Tin-land and Kaptara (Kaphtor or Krete) countries beyond the Upper sea (Mediterranean) and Dilmun and Magan (Dellim-Bushire and El Hassa), countries beyond the Lower Sea" (Persian Gulf). In another inscription of a later Sargon, governor in 2180 B.C., he stated that he had conquered Egypt, then under a Nubian dynasty; this would fall in the confused age of the XVIth dynasty, when we know of a southern immigration from Nubian pottery at Esna, and also by the "pan-graves" at Hu and elsewhere. Another record which is earlier than Sargon of Akkad, states that "5 minas of pure tin" had been received at Lagash. A Hittite text from Boghaz-keui mentions where various materials were obtained (places not yet identified) and "black iron of heaven from the sky, copper and bronze from the city of Alasiya and Mount Taggata."

Palestine Exploration Fund, Quarterly Statement. October, 1922.

The proposal that various bodies should join in the excavation of Ophel is here noticed. This region south of the temple area is considered to be the original hill of Zion, the site of the palace and tombs of the Jewish kings. It is much to be hoped that the Palestine Fund will be well supported in taking up a portion of this work. The whole direction will obviously have to be under the Department of Antiquities for Palestine, at least during the earlier stages of the work.

An account of the work of the University of Pennsylvania at Beisan records finding a basalt stele of Sety I.

Académie des Inscriptions. Comptes Rendus. Mai-Juin, 1922.

M. Virolleaud reported on May 8th finding in the contents of the sarcophagus at Byblos a small gold cartouche of Amenemhat III, the signs soldered on to a base plate, which fitted in a recess on the lid of an inscribed vase.

M. Naville drew attention in a letter to the resemblance of the obsidian vases with gold settings to those published in *Lahun I*.

On July 7th was reported the discovery of a second cartouche of Amenemhat III fitting a second vase of obsidian. Also of three bronze vases (? copper), one of which is a basin 17 inches wide.

In the same part are drawings of a slab lately found at Athens, of the fifth century B.C., on which a game of hockey is carved.

Bulletin of the Metropolitan Museum. New York. August, 1922.

This records an interesting group of objects which came from a tomb, but it is said not from Tell el Amarna. As usual with objects bought from natives, there is no assurance that the whole of them were found together. A double limestone ushabti for Khoemuast and his wife Mest gives the only personal name, and he is supposed to have been the owner of the tomb. There is a fine lotus flower goblet of alabaster, with the Aten cartouches, and those of Amenhetep IV and Nefertyti; a heavy gold ring of Tut-onkh-amen shows that the group comes down to the latter part of his reign. There is a green faience globular vase with wide neck, bearing names of Akhenaten and queen in black inlay; two ivory female figures have on one a lotus flower on the head, on the other a lily; and there is a heart scarab, with the name left blank. The period assigned to the successors of Akhenaten in this paper seems impossibly short.

Museum of Fine Arts Bulletin. Boston. No. 114.

The Tomb of Tehuti-Nekht and his Wife.—The well-known tomb of Tehuti-nekht at Bersheh had been published, with a date of the 31st year of Senusert I, but owing to heavy falls of rock, the burial shaft had not been searched. The tomb had been plundered in Roman times, but no later attempt had been made until the Harvard expedition in 1915. On entering the chamber there were remains of two burials. One great cedar sarcophagus and coffin had the ends removed; another had been separated as boards. Both sarcophagi and both coffins were inscribed for Tehuti-nekht. A mass of models of ships and servants lay piled between the great sarcophagus and the wall. The mummy lay on its left side, facing the doorway painted on the coffin. By the doorway is a scene of the noble seated before a table of offerings. The painting of funeral articles is of the standard type, but unusually fine in detail. The best of the models is of a procession bearing offerings; a shaven priest leads, carrying a tall vase, three women with baskets and birds follow. There are also models of ploughing with a yoke of oxen, and of five men making bricks, bringing clay, mixing it, and pressing the bricks.

NOTES AND NEWS.

The lamented death of the Earl of Carnarvon has made a tragic break in the history of his and Mr. Carter's greatest success. The climate of Egypt prevents visitors realising the varied risks which easily beset those who are fatigued, and the strain of the last few months left little resistance to the familiar infections of the country. It is to be presumed that the responsibility for completing the clearance of the tomb of Tutankhamen will now rest on its owners, the Egyptian Government.

It is to be feared that the Government will remove all the contents of the tomb to Cairo, where they will inevitably deteriorate and slowly perish. An estimate of £36,000 has already been made for an extension of the present Cairo Museum, in its most undesirable situation. How it will be possible to transport the mass of the weighty shrines is one of the greatest difficulties. The side of the rock chamber will have to be entirely quarried away, and the shrine cut up into such sections as can be moved. Each side of the outer shrine will weigh nearly a ton, and could not be handled in anything like that mass without crushing the gilt gesso and the inlays; it must be cut into many sections for removal. There will probably be over ten tons of such material to be removed in dealing with all the successive shrines. It will be a much slower and more expensive affair to build new halls at Cairo, and then shift the existing collection, and remodel the lighting of the present building for the new objects, than it would be to place a new building up at Deir el Bahri.

Mr. Mackay has been successful in finding an inscription of Samsuiluna, the successor of Khammurabi, identifying the site Tell Oheimer as Kish. As there were four supremacies of Kish before that, going back to the earliest times, we may hope for fresh insight on the earliest stages of Babylonian civilisation.

The Egyptian Government now announce that the law on antiquities will not be changed till 1925, so it will be possible to make arrangements for next season.

The British School has continued the clearance of the large cemetery of Qau el Kebir, begun in November. Mr. Brunton reports that a region containing tombs of all periods has now been reached, which was used from prehistoric to Roman times. The former German and Italian excavators have cleared most of the cemetery of this nome without attempting to issue any record of their work. This was mere plundering, and as bad ten years ago as it was a century before.

RECENT DISCOVERIES OF THE BRITISH SCHOOL IN EGYPT.

The Exhibition of Antiquities from Qua el Kebir will be held at University College, from July 2nd to 29th (evenings of 10th and 20th).

A public lecture, with lantern illustrations, will be given by W. M. Flinders Petrie, F.R.S., at University College, Gower Street, on Thursday, 17th May, at 2.30 p.m. Admission free, without ticket. This is the first of a guinea course of six lectures on Thursdays. The lecture will be repeated on Wednesday, 23rd, at 5 p.m., and Saturday, 26th, at 3 p.m. Admission free, without ticket.

ANCIENT EGYPT.

THE TOMB AT BYBLOS.

WE have noticed in past numbers the reports of a tomb of the XIIth dynasty, found last year by an accidental fall of the shore-cliff at Byblos, 20 miles North of Beirut. The discovery has now been published fairly completely in the French journal *Syrie* (1922, pp. 273-306, with nine plates), which must be studied in detail by anyone dealing with the eastern Mediterranean archaeology. Here we can only give a few outlines of the forms which are most important in their bearing on Egyptian subjects.

The shape of the tomb is complicated. The burial chamber is rather irregular, 17×14 feet at the largest. About 3 feet has been walled off by rough stonework to support the roof, leaving it about 14 feet square. Opposite that wall is a filled up pit, the whole width of this chamber, made for lowering the sarcophagus. The access was in a third wall, by a bent and sloping passage, 47×66 inches at the smallest; this is 44 feet long and was reached by a shallow pit from the surface. Accidentally a small circular chamber has broken through the side of the passage; it is about $8\frac{1}{2}$ feet across and had its own pit for access. This system is entirely native and not copied from Egypt.

The form of the limestone sarcophagus is likewise not due to Egyptian influence (Figs. 10, 11). The four large knobs on the top, for lifting the lid, are unlike anything in Egypt, as also is the curving of the top edges and of the lid to fit that. Happily, accurate measurements are given in the plate, though not repeated to show the variations in accuracy. These show considerable care in the proportions, and also the unit of measure. They are here reduced to inches, as being familiar to our sense of size.

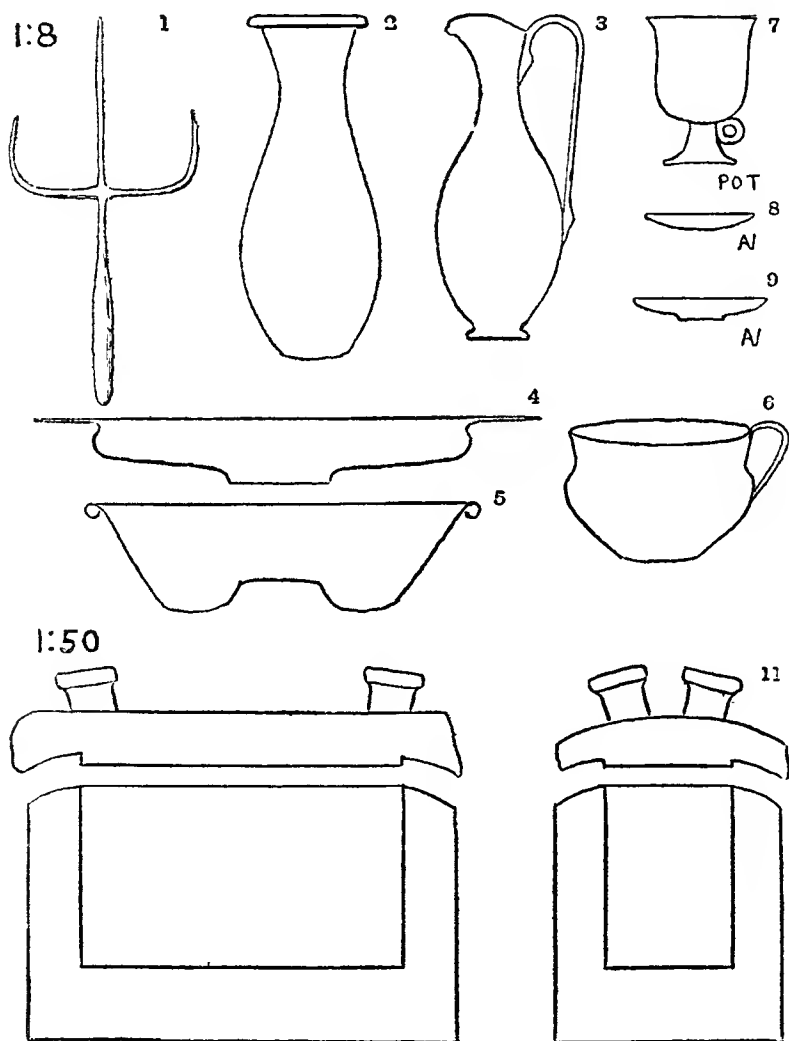
Out length	..	$111\cdot14 \div 40$	$= 2\cdot778$	inches.
Out width	..	$58\cdot35 \div 21$	$= 2\cdot778$	„
In length	..	$83\cdot07 \div 30$	$= 2\cdot769$	„
In width	..	$33\cdot39 \div 12$	$= 2\cdot782$	„
Depth in	..	$48\cdot54 \div 17\frac{1}{2}$	$= 2\cdot774$	„
Depth out	..	$66\cdot18 \div 24$	$= 2\cdot757$	„

The deficiency in the last measure may be due to the bottom being invisible, and the measurement being only made from the ground. The mean of these, omitting the last, is $2\cdot776$, mean error $\cdot004 \pm \cdot002$. This palm measure being multiplied by 12, 24 and 40, was probably a quarter of a foot of $11\cdot10 \pm \cdot01$ inches.

Forty-six years ago, I published deductions from measures of monuments, with which we may compare this foot (*Inductive Metrology*).

Hauran	...	...	...	...	11·08 inches	=	·4362 metres.
Byblos, 1922	...	...	...	...	11·10	„	= ·4374 „
Syria	...	...	...	...	11·13	„	= ·4382 „
Sardinia	...	...	...	...	11·14	„	= ·4386 „
Carthage	...	...	...	...	11·16	„	= ·4394 „
Asia Minor	...	...	...	...	11·17	„	= ·4398 „

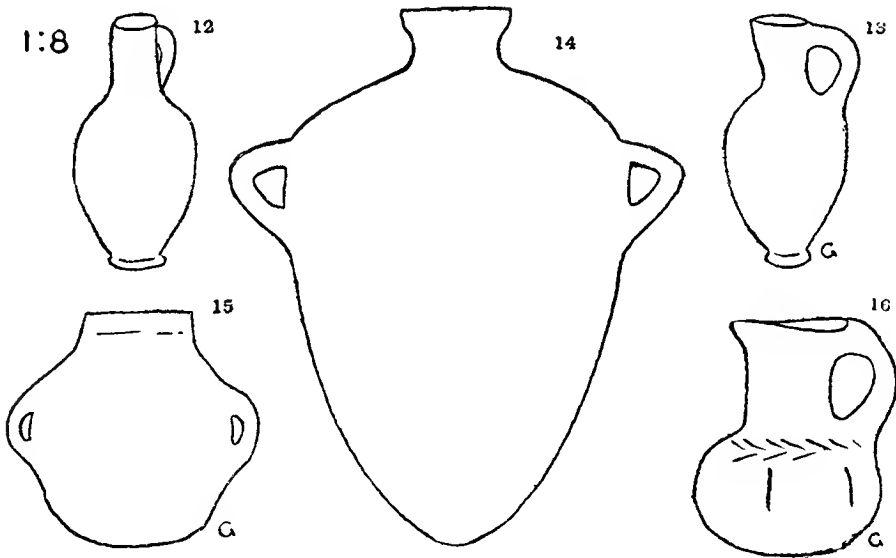
These regions are all of Syria or the Phoenician Colonies, and this leaves then no doubt as to the true home of this foot.



The lid of the sarcophagus was in place, and the gold dishes in it suffice to prove that it had never been opened. The contents of it are difficult to interpret. The place of the feet is shown by two silver sandals. With those were the jug, Fig. 3, the fluted silver vase, 17, a silver bowl with double spiral pattern inter-linked. Rather further up was a gold saucer, Fig. 8; and a falchion lay with the handle toward the feet. By the head end was the other gold dish, 10, and an

obsidian ointment jar and lid, with gold mounting, like that found at Lahun, but with the name of Amenemhat III inlaid in the lid. Near this was a gold plating which had covered a wooden bracelet, a silver mirror and dish. The puzzle is that no skeleton was found. There were only some patches of broken bones, one patch on the sandals, and a patch in each corner of the head end. When such slight bones, as some of these are, had remained, it seems incredible that the massive limb bones could have entirely disappeared. Of these fragments of bone two were human, beside two teeth, others were of goat, ox, partridge and fish, apparently remains of food offerings.

In the chamber, outside of the sarcophagus, were ten large jars (Fig. 14), many plates, a copper vase (2) and three tridents (1), one of them inside a broken jar. There were also two large copper basins (4, 5), and a pot with handle (6). A most interesting pottery cup (7) was found lying on the floor, with the stem broken off. Some large copper rings with long stems, had evidently come from woodwork, probably 9 inches thick, indicating massive furniture. These lay together in one corner. It is also stated that some pieces of Roman glass were found in the chamber. There are strong suggestions that it had been entered and partly routed over, yet copper basins and vase were left behind, and no attempt was made upon the sarcophagus.



SYRIAN POTTERY.

Within the sarcophagus everything was covered with a thin layer of ashes (*cendres*): "this was a black substance, brittle, shining in places, very damp, and bearing here and there the impression of woven stuff of more or less closeness." This layer was nowhere more than a couple of inches thick. From this description it seems that over linen there had been poured a layer of cedar resin, so often used in Egypt as a preservative: this perishes and falls into little blocks with glittering faces, by long exposure to damp. This layer makes the absence of a skeleton still more inexplicable.

We can now turn to consider the connections of the objects found. The date of the obsidian vase under Amenemhat III is beyond doubt, as it bears his name and closely resembles one of his in Egypt. That this was not an older object

reburied is shown by the string of 102 amethyst beads and an amethyst scarab, as such are hardly ever found except in the XIIth dynasty, when the vein of amethyst was known. Other Egyptian works are a gold uraeus, a heart amulet, a silver plate with part of a spread vulture embossed, ferrules with lotus flower pattern, a silver mirror, two alabaster vases, typical of the XIIth dynasty, and pieces of ivory and glaze panels from the sides of decayed caskets, like that of Lahun. These inlays were blue and green glaze, but most have faded to white and yellow by the damp.

The Syrian objects are the important matter, as they give us for the first time many things exactly dated to the XIIth dynasty. The peculiar sarcophagus has been noted (Figs. 10, 11). A most interesting discovery is that of the jug and basin for washing hands, like the modern *abryq* and *tisht* (Figs. 3, 5). The raised centre to the basin marks the purpose of it distinctly—as in present use. It serves for the jug to stand on, to prevent it dripping when lifted up; it marks distinctly that the use was for slight ablution by successive persons, the waste water lying round the central island. No one would have credited these objects with half the age had they been found undated. So far as we know, the Egyptian never used such till after the Arab conquest; they show, like other things, the independent and superior civilisation of Syria. The pottery cup (7) is again a Syrian invention, which later produced the lotus cup of the XVIIIth dynasty,



after the Syrian craftsmen were taken by Tehutmes III. This also explains the source of clumsy forms of the cup with a foot, which are found during one or two dynasties, after the Syrian invasion of Egypt in the VIIth and VIIIth dynasties. The two golden platters or saucers (8, 9) are probably Syrian, as such are not found in Egypt. The copper bowl with a handle (6), the tall jar (2) and the dish with a wide flat brim (4) are probably all Syrian. The flesh hooks of copper (1) are not to be compared with heavy agricultural forks (*Tools and Weapons*, LXVII), but with the light flesh hooks of various forms (*Tools and Weapons*, LXXII, 61-5). The silver sandals seem to be probably Syrian, as the outline is rather straighter on the inner side than the Egyptian. Such funeral copies in metal are, however, known in Egypt, as there is a pair in thin embossed copper in University College. The pottery is valuable as a starting point in dating. The forms 12, 13 and 14 are from the tomb; but 15, 16 are from the small circular tomb which broke into the passage, and might be either earlier or later. The handles of 15 are found on foreign pottery in Egypt of the Ist dynasty. The falchion is probably North Syrian or Asiatic. The Cretan vases of silver are excellent examples, now fixed in relation

to Egyptian history. The fluted vase with a spout carries on in metal the idea of the many stone vases with long spouts from Mochlos. Along with it lay a silver bowl with a double row of interlaced spirals, each centre having three branches. Such design lasted long, as it is also found on scarabs of Hatshepsut, and on a golden vase in the fourth tomb of the ring at Mykenae.

This tomb is thus a firm starting point for the dating of Syrian work, the definition of Syrian types, and the relations of Egypt, Syria, and Crete. Let us hope that this most important site of Byblos—temple and tomb—will be soon worked with full record and publication of all *groups* of objects, which alone can put the Syrian archaeology on a firm historical basis.

W. M. FLINDERS PETRIE.


NOTE SUR UNE TOMBE DÉCOUVERTE PRÈS DE CHEIKH-FADL
PAR MONSIEUR FLINDERS PETRIE ET CONTENANT DES
INSCRIPTIONS ARAMÉENNES.

LORS de sa campagne de fouilles 1921-22, à Bahnésa, M. Flinders Petrie découvrit—au cours d'une excursion sur la rive droite du Nil, et à 8 kilomètres environ à l'E.N.E. de Cheikh-Fadi—un tombeau creusé au sommet de la montagne arabe dont les parois portaient les restes d'importantes inscriptions peintes. Le savant anglais, avec sa maîtrise ordinaire, reconnut de suite qu'il avait affaire à des textes araméens. Il voulut bien, avec un libéralisme auquel je suis heureux de rendre hommage, me demander de relever ces textes afin d'en entreprendre le déchiffrement. En mars 1922 je pus profiter de deux journées pour aller examiner les lieux et copier sommairement les inscriptions, mais je n'avais rien de ce qui aurait été nécessaire, pour établir une bonne copie. Le travail était rendu très-difficile par le manque d'éclairage du tombeau et les ombres portées par les accidents des parois qui empêchaient de distinguer nettement les caractères subsistants. Je pus néanmoins me rendre compte de l'importance de la découverte de M. Flinders Petrie pour l'épigraphie araméenne. Je dus attendre décembre 1922 pour faire une nouvelle visite à Cheikh-Fadl en compagnie de M. Lacau, Directeur Général du Service des Antiquités, qui avait tenu à examiner lui-même la nouvelle découverte et qui—pour sauver ces textes à la science avant qu'ils n'aient été endommagés davantage par l'air ou les arabes du voisinage—avait amené avec lui M. Busutil, l'excellent photographe du Musée du Caire. En trois jours, nous pûmes cette fois avec les moyens appropriés—miroirs pour éclairer la tombe, plaques panchromatiques, écrans colorés à cause de la polychromie des peintures—obtenir de bonnes photographies de la presque totalité des textes¹ et prendre de nouvelles copies. C'est à l'aide des unes et des autres que je tente aujourd'hui de donner un aperçu, malheureusement bien incomplet, du contenu des inscriptions du tombeau de Cheikh-Fadl.

Ce tombeau s'ouvre face à l'est au sommet de la montagne. Il se compose d'un vestibule dont les parois ont été taillées à même la roche. Anciennement un toit fait de matériaux rapportés—peut-être soutenu par des colonnes du côté de la plaine—devait couvrir cette première salle et il est possible également qu'une rampe d'accès ait été ménagée en avant pour gravir la pente. Cette première partie du tombeau n'ayant pas été déblayée je ne saurais garantir l'exactitude de cette description. Étant donné l'importance que présenterait la découverte de nouvelles inscriptions, M. Lacau doit charger un inspecteur du service des antiquités de dégager entièrement ce vestibule. À la suite venait le tombeau proprement dit, une pièce rectangulaire d'environ 4 m. de large sur 5 m. de long et 2 m. de hauteur creusée dans le calcaire dont le plafond est constitué par la plateforme même du sommet de la montagne. Au fond, en retrait, une

¹ Par suite du manque de plaques, nous n'avons pu photographier les textes numérotés ci-après 1, 6, 7, 10, 14, 15 et 17.

niche béante aujourd'hui et qui devait être autrefois fermée par la *stèle-fausse-porte* qu'on retrouve dans les tombeaux congénères. Dans l'angle, sud-est de la tombe, s'ouvre un puits carré qui donne accès à trois (?) chambres que nous n'avons pu visiter. Ce tombeau se présente donc à nous avec les caractéristiques générales des monuments funéraires du Moyen Empire, et il est probable qu'il fût creusé à cette époque, mais il a été réutilisé au moins une fois beaucoup plus tard ; c'est la conclusion qu'on peut tirer de ce qui subsiste de la décoration. Cette décoration, fresques en teintes plates, qui orne les quatre parois, occupe un registre d'une hauteur de 0m.74 à compter du plafond. Au-dessous la roche qui n'a pas été *parée* laisse voir encore les traces de l'outil employé au creusement de l'hypogée.

Voici sommairement la description de ce que l'on peut *deviner* des peintures : sur la grande paroi (Sud) à droite de la porte, un bateau rouge à 21 (?) rameurs dans un double cadre de la même couleur, plus loin des personnages debouts, face à gauche, c'est-à-dire marchant vers la niche, dont les pieds seuls subsistent. Paroi du fond (Est), à droite de la niche, restes d'une barque (décoration primitive ? effacée ensuite ?) au-dessus personnages marchant vers la niche dont un a disparu. Même paroi à gauche de la niche, deux personnages debouts allant à droit : le premier à gauche, peint en bleu, conduit (?) un veau (?) rouge. Grande paroi à gauche de la porte (Nord), deux quadrupèdes (?) momifiés, disque et cornes en tête, encadrés de raies rouges, plus loin un épervier, plus loin encore des personnages face à droite tenant le sceptre .

C'est à peine si l'on peut saisir quelques linéaments de ces tableaux et dans ces conditions il devient impossible de préciser la date des figures d'après le style et la facture de ce qui subsiste. Au dire de M. Lacau le bateau à rames *pourrait* (??) dater du Moyen-Empire, le reste de la décoration serait plutôt saïte. Impossible également de préciser si les textes araméens, peints à l'encre rouge et très mal conservés qui coupent les figures, présentent un rapport quelconque avec elles. C'est cependant improbable.

Toute la partie supérieure du registre contenant les figures était peinte sur un banc de calcaire plus friable que le reste, elle a presque complètement disparu emportant avec elle le commencement des inscriptions. En outre, les textes qui subsistent sur les parties conservées ont été endommagés par le frottement du sable, martelés par endroits, et sont coupés dans toutes les directions par les *graffiti* postérieurs : un araméen, les autres grecs, coptes et arabes. Il est impossible de savoir à quelle hauteur se trouvait la première ligne des textes, et dans plusieurs cas on ne peut également déterminer avec certitude où commençaient et finissaient les lignes. Les difficultés de lecture se trouvent encore augmentées par les couleurs des dessins sous-jacents ; surtout quand ceux-ci sont également peints en rouge.

Je crois cependant pouvoir discerner 17 inscriptions différentes dont l'importance va d'un simple mot à neuf lignes conservées. Les textes ne paraissent pas toujours avoir été tracés par la même main. Partout cependant les mots étaient nettement séparés par des blancs. Pour passer plus facilement les inscriptions en revue, et les situer à leur place respective, je les ai numérotées de 1 à 17 sur le plan reproduit ici, d'après le relevé de M. Lacau. N'ayant pas noté les dimensions de chaque texte, j'indiquerai pour remédier à cette lacune provisoire le nombre approximatif de mots contenus dans une ligne moyenne de chaque texte.

PAROI (SUD).

No. 1. Sous le grand bateau à rames deux lignes comprenant quelques caractères seulement.

No. 2. Ce texte comprenait au moins 12 lignes (10 mots à la ligne). 9 d'entre elles sont encore susceptibles d'être déchiffrées dans les parties conservées. Je suis incapable, pour le moment, d'affirmer que nous possédions encore le commencement des lignes, mais il est certain que la fin manque.¹ Cette inscription paraît se rapporter à l'ensevelissement du ou des propriétaires de la tombe, l. 8 :

לא אכל אשכנח אשכנב עמה רחם אנה לחי שגיא

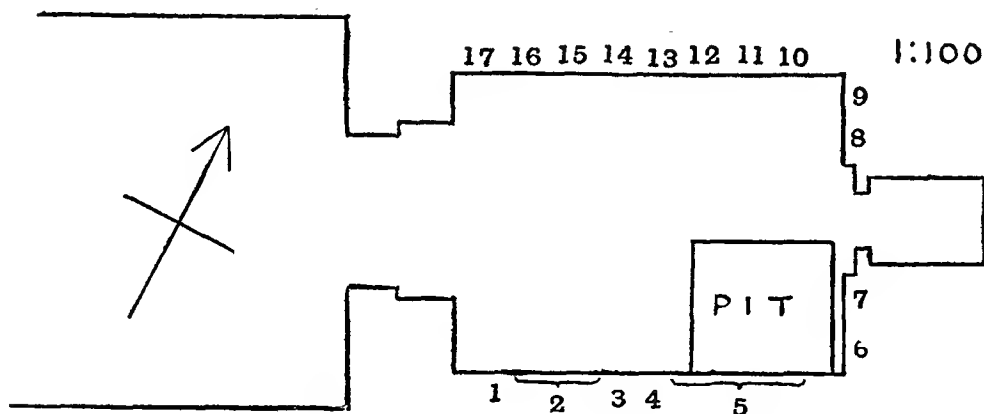
je ne peux l'abandonner, je reposerai avec lui (parce que) j'aime beaucoup Lehi (?) . . .

On pourrait traduire aussi "j'aime beaucoup la vie" en prenant le ל comme préposition introduisant le complément. Sous réserve de la vocalisation du nom propre je préfère la première traduction parce que nous retrouvons ligne 3 :

... אשכנב עמה רחם אנה לחי שגיא ועלימא

je reposerai avec lui (parce que) j'aime beaucoup Lehi (?) et le jeune homme . . .

et à un arrangement conclu avec des tiers à ce sujet :



l. 6. נתן לזכרן (א), *je donnerai aux prêtres (?)*, je crois reconnaître la mention du dieu שמש deux fois, ligne 9, et celle d'un nom divin composé avec le nom du dieu égyptien Atoum (?)

l. 5 אתמנרן אלהא זי לה הן אנתן לה

ATMNRN son dieu. Si je lui donne.

Nos. 3 et 4 ne forment qu'un seul et même texte ; une grande lacune verticale coupe au milieu la partie conservée. On peut déchiffrer quelques lettres de 8 lignes ; il semble que nous possédions la fin des lignes ; tout le commencement manque. Ce texte est séparé du précédent par un espace où tout a disparu excepté deux lettres . . . דמ . . . Il ne saurait être question de le regarder comme représentant la fin des lignes du No. 2 parce que sa première ligne (dernière du texte) correspond comme position à la 6ème du précédent. Il était néanmoins la suite logique du No. 2, et devait contenir des clauses défensives contre les tiers

¹ Ici et plus loin je numérotai les lignes en partant du bas dans l'ignorance où je suis du nombre de lignes manquantes.

qui voudraient éventuellement occuper le tombeau. C'est à quoi font allusion, je crois, les seuls mots pouvant se lire à la suite :

... כל אנוש יהי תמה ...

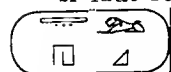
Tout homme (?) qui sera là.

No. 5. Le plus important de la série malheureusement dans un état lamentable. Restes d'au moins 11 lignes (12 mots à la ligne), dont 9 semblent susceptibles d'être déchiffrées avec de la patience. Les lignes de ce texte paraissent bien commencer immédiatement à gauche de la robe d'un personnage encore visible. Un large trait rouge vertical marque la fin des lignes de la première tranche du texte, la suite également incomplète par le haut est comprise entre ce trait rouge et un second trait de même couleur qui lui est parallèle. De ce deuxième texte, 5 lignes (7 mots à la ligne) seulement peuvent être utilement étudiées. Je crois retrouver dans ce No. 5 les noms de **בסמטך** *Psamétique*, l. 9 et l. 8 deux fois, et de *Taharqa*, l. 6 deux fois, l. 5 une fois, appelé l. 6 :

... תהרקא מלך כרשיא (?) זי מלך תמה ...

Taharqa roi de Kous (?) qui règne là-bas

Il faut remarquer que le nom de *Taharqa* est écrit conformément à l'égyptien



, תהרקא, forme déjà supposée par Oppert¹ comme type primitif de ce nom rendu dans la Bible תרהקה.

La lecture . . כרשיא . . est très douteuse—sans parler de la forme insolite du mot—les deux premiers signes ne présentant qu'une tache informe. Il semble que le peintre avait commencé à écrire un כ, songeant sans doute à **כשיריא**, puis qu'il s'est ravisé ne voulant pas donner à *Taharqa* le titre de roi d'Egypte et de Néchao mentionné comme . . פרעה [כר] . .

le Pharaon Néchao. Je complète ainsi le nom d'après le texte du numéro 8, voir plus loin.

D'après ce que je crois saisir—ceci sous les plus expresses réserves—le No. 5 relaterait certains événements se plaçant à l'époque troublée des invasions assyriennes en Egypte. Il retracerait les démêlés de *Psamétique I*, de son père Néchao, et peut-être d'un autre prince avec *Taharqa*. Un des morts ensevelis dans la tombe où un de ses ascendants aurait été mêlé à ces événements comme partisan de *Taharqa*. La qualification de . . כרשי . . *mon seigneur* qu'il donne à *Taharqa*, l. 5, me semble l'établir. Je ne crois pas que le roi d'Assyrie ait été mentionné dans les parties du texte qui sont conservées et je suppose qu'à la l. 4 l'appellation . . כרשי מלכא . . *le roi mon seigneur* s'applique encore à *Taharqa*.

Entre la fin du No. 5 et l'angle peut-être y avait-il encore place pour un texte où rien ne subsiste.

PAROI (EST).

No. 6. Traces de quelques mots dont je n'ai qu'une copie et où je distingue seulement . . אלהא אמר . . *le dieu dit*.

No. 7, un seul mot . . שמי . .

No. 8 devait contenir pour le moins 13 lignes (10 mots à la ligne), 7 sont conservées dont la fin se perd sur les pieds d'un personnage. J'y relève l. 7 . . ענה ואמר . . *il parla et dit* l. 6 : . . תהרקא תמה . .

¹ *Mémoire sur les rapports de l'Egypte et de l'Assyrie*, dans *Ac. des Inscript. et Belles-Lettres. Mémoires présentés par divers savants étrangers*. Tome VIII, 1ère partie, 1ère série, page 625.

Taharqa là-bas . . . l. 4 . . . לפרעה נבו . . . au Pharaou Nécho . . . ici nous avons encore affaire aux débris d'un texte historique.

No. 9, texte qui faisait probablement suite au précédent 7 lignes (7 mots à la ligne) reconnaissables, incomplet à droite. Je crois relever l. 5 mention d'une défaite des égyptiens . . . חבל מצרין . . . de l'envoi d'un message l. 4 שלח עליהם . . . et du Pharaou l. 1 פרעה.

PAROI (NORD).

No. 10, au moins 4 lignes dont on ne distingue presque plus rien, j'y ai cependant noté la présence du verbe שכב indiquant que ce texte avait un caractère funéraire.

No. 11, une ligne (4 mots à la ligne) incomplète à droite et peut-être aussi à gauche ; il y est question de sacrifices ?

l. 2 et 1

. . . מתעשתן אהן . . מ תהרקא ?
 . . . מן כמרן עבדן הם קרבא . . .
 . . . nous pensons . . . Taharqa . . .
 . . . des prêtres qui font le sacrifice . . .

No. 12, traces de 12 lignes très incomplètes ; il y était fait mention, je crois, des pénalités qui frapperaient ceux qui voudraient se faire enterrer dans la tombe et ensuite de certaines fêtes (?).

No. 13, 4 lignes (4 mots à la ligne) ; ce texte, bien que le commencement des lignes soit très—indistinct, paraît complet. J'y relève la mention || ||| בללה בשנת . . . “ l'a terminé l'an V.” Malheureusement de ce qui suit impossible de tirer un nom de roi. Le souverain n'était probablement pas indiqué.

No. 14. Quelques signes tracés au travers d'un reste de peinture.

No. 15. Un mot isolé entre un personnage et un objet indéterminé.

No. 16. Restes d'une dizaine de lignes, 4 en haut et 6 en bas du panneau ; tout ce qui existait dans l'intervalle a disparu. Les deux textes paraissent avoir été tracés par deux mains différentes. Celui du bas se termine par לספרא זי כתב בתבא “ au scribe qui a écrit (cette) inscription ” Entre les deux textes un graffito araméen.

No. 17. Restes de trois mots qui terminaient un texte.

* * *

Paléographiquement ces textes ne paraissent pas s'écarter de l'époque des papyrus araméens d'Éléphantine, ainsi qu'on pourra en juger par les quelques lignes reproduites ici.¹

. תה / הוא בלעדיהם
 הם / בען וימטאן בד'
 ויגר / אבהיהם
 ← robe →

¹ Elles appartiennent au début de l'inscription n° 12 et ont été choisies parce que c'est le seul passage où quelques caractères apparaissent entiers. Ils sont peints en rouge sur la robe verte d'un personnage et se transcrivent matériellement ainsi :



PHOTOGRAPH OF PRECEDING INSCRIPTION.

La mention de Taharqa, de Néchao et de Psamétique—si elle est confirmée—n'apporte pas nécessairement une contre-indication à ce diagnostic chronologique. Ainsi que je l'ai remarqué plus haut, le n° 5 relate vraisemblablement certains événements quelque peu antérieurs à l'époque où il a été écrit ; au moment où l'Egypte allait passer aux mains des Perses. Le récit nous faisant remonter jusqu'à Taharqa pourrait n'avoir qu'un caractère d'histoire rétrospective rappelant les précédents d'une situation politique qui se serait établie plus tard.

Le tombeau aurait donc été réutilisé pour quelque fonctionnaire civil, militaire, voire religieux, de langue araméenne, dont l'inscription retracerait à grands traits le *curriculum*. Si réellement ce fonctionnaire, comme il semble, dépendait de Taharqa on pourrait songer à un ancien fonctionnaire assyrien qui aurait trahi son roi, Asarhaddon ou Assurbanipal, pour passer au service des maîtres provisoires de l'Egypte. Cela fixerait approximativement la date des inscriptions entre le milieu du VII^{ème} et la fin du VI^{ème} siècle avant J.-C. Toutes ces questions ne pourront avoir leurs réponses que lorsque les textes sommairement analysés ici auront été définitivement traduits. Ce travail demandera encore beaucoup de temps et plusieurs visites nouvelles à Cheikh-Fadl pour contrôler la vraisemblance des nombreuses hypothèses qui viennent à l'esprit.

NOËL GIRON.

THE BRITISH SCHOOL AT QAU.

THE work of our Society this year has been entirely at Qau-el-Kebir, a headland of the eastern cliffs, about thirty miles south of Asyut. This was known to have been an important place, probably of the XIth dynasty, under a series of princes, who left large rock tombs. As it was being continually plundered, it seemed desirable to finish what remained. Unfortunately it has in recent times been largely worked by an Italian and by a German, neither of whom have published any account of their work; the Italian plunder is of much artistic importance, yet it lies piled up in a case in Turin, useless at present to anyone. It was therefore rather a work of piety than promise, to follow after so much clearance had been made.

The oldest remains found were a collection of mineralised bones, mostly hippopotamus, but including portions of three human skulls, which, strange to say, had been gathered and piled in an ivory worker's store. The reason is difficult to see, as they are very hard and almost unworkable. The subject may have such importance that it will have to be studied on the spot next year, to find the natural source of these bones. Small prehistoric cemeteries were found of the second period, which we hope to work further next year. A fine group of vases from a tomb of the IIInd dynasty were obtained, and many examples of the bright red polished pottery of the IVth dynasty, which has seldom been secured from recorded sites. The historic interest begins with several tombs of the IVth-VIth dynasties, with characteristic alabaster vases. With these are the stone amulets of parts of the body, deities, and animals, which are thus fixed to this period. These amulets continued in use, rather rougher in work, and of ivory and green glaze, along with button badges, which were brought in by the Syrian immigrants, and were continued in use by the Syrian invaders of the VIIth and VIIIth dynasties. With these were also the seals with geometrical figures of men, pyramidal seals with animals, and figures of lions and other beasts with geometrical designs on the base. The whole of these varieties, which have been vaguely known hitherto, are now all tied together, and connected with the two Syrian dynasties. Entirely distinct from this group there appears in the IXth dynasty a revival of the use of the scarab, but always with designs greatly degraded by repeated copying, showing that they are the successors of an earlier class of intelligible designs. These agree with the scarabs of the same period which have been found at Harageh, Sedment, and elsewhere. Thus the use of the scarab has been cleared up evidently as far back as the Old Kingdom.

The great rock tombs still need planning. The architectural system is remarkable. Large sloping causeways were made up to the entrance; in the main tomb the causeway led to a large peristyle court levelled into the rock, like the forecourt of a temple. In the axis a steep gangway of rock sloped up to the portico of the tomb above, cut across by a gap which may have needed bridging when the tomb was visited. The tomb had two rows of columns in the portico, built out in advance of the rock chambers behind it.

On coming down to the XIXth dynasty the ivory worker's shop is the principal thing, providing a great number of simple pieces, and some of artistic interest. In late times the importance of the place continued ; a batch of 50 solidi of Constantius II, and several Coptic tombstones were found.

The outstanding discovery of the year is one of the earliest Coptic biblical manuscripts. It was a narrow book of nearly a hundred pages of papyrus, containing the gospel of St. John ; only a minor part is injured or missing. The handwriting is very regular, most like the Codex Vaticanus in the beginning, and more like the Codex Sinaiticus in the body of it. Thus it ranks in age with the earliest authorities for the text. It differs from the printed version of the Coptic ; and when the various readings shall have been collated, it will have much weight in settling which class of Greek readings was recognised by the Egyptians as the authority in the time of our earliest copies. This papyrus book has only one column on the narrow page. It had been evidently buried at a time of persecution, probably under the early Muslimin. It was doubled up twice across the hinge, tightly tied in a cloth, and buried in a jar in the ground, close to Roman graves.

All of this work was carried on by Mr. Brunton, aided by Mrs. Brunton, M. Bach, and Messrs. Frankfort and Starkey. I was prevented from going, owing to the necessity of finishing the publications of previous years. *Harageh* has been issued ; *Lahun II* is being printed ; *Sedment*, and the *Tombs of the Courtiers*, are ready for the press. When I was at Oxyrhynchos in the previous season I found at Sheykh Fadl on the eastern desert a tomb of the Old Kingdom, much defaced, with Aramaic inscriptions. There are very few scholars who can deal with such material, and I asked M. Giron, of the French Embassy, to visit the tomb. He gave much attention to it, and M. Lacau had the inscriptions photographed. The first report on them is in this part, and is of great interest, as pointing to a Jewish settlement so far up in Egypt as early as the reign of Manasseh. Tirhaka is mentioned, showing that the family here went back to eighty years before the fall of Jerusalem. This proves that these people, and doubtless others, were passing freely through the Greek camp of Tahpanhes continually, and must have been familiar with Greek words and objects and thoughts in the time of the earlier prophets. Thus a strong light is thrown on the literary criticism of the prophetic books. M. Giron has preferred now to hand over all his copies and the photographs to Dr. Cowley, who has the greatest familiarity with the subject, and if any further results are possible, we shall be sure to reap them.

W. M. FLINDERS PETRIE.

THE MAGIC SKIN.

(Continued from page 8.)

WHEN we turn to consider the question of Skin Magic from the point of view of Ancient Egypt, little that is decisive can be discovered, although it is clear enough that skin rites were known and practised, the material is too elusive and enigmatic to interpret with certainty.

The most definite piece of evidence is the statement of a certain Wapwatua : " His Majesty allowed me to slay oxen in the temple of Osiris Khent Amenti in Abydos . . . and I went forth over the hides there owing to the greatness of the favour with which His Majesty favoured me."¹

Turning to the next source of evidence we are no longer on such sure ground. This is the body of references to the Mesqa in religious texts. Lefebure has made a valuable contribution to the subject in his discussion of this word.² His conclusion is that the Mesqa was originally the skin used in rites of rebirth, and that meska (mesek), mesken, mesqet, which occur fairly frequently in the Book of the Dead, and in tomb-chapel inscriptions occasionally, are cognate words which came to be applied to media and objects and places connected with ceremonial rebirth in more or less contingent degree. To traverse the Mesqa came to be a synonym for passing to the New Life ; the roads traversed, and the places reached, country, island, lake, mansion, city, sky, all came to be designated by words of this root with or without the appropriate termination or determinative ; at the same time these same names were used symbolically of the skin. This clearly opens a very wide field for diffuse and mystical theorising. A further flight of esoteric fancy represented the skin as the wings by which the dead reached the sky, or the Cow that bore them across the Sacred Lake.³ Fantastic symbolism of this sort is characteristic of Ancient Egypt, and indeed all mystical philosophy, and there is no inherent difficulty in accepting Lefebure's results.⁴

The main hindrance is that the texts upon which so much depends, are so variously rendered by different translators. This applies especially to the Book of the Dead. Budge translates Mesqet as the chamber of torture, which is clearly the significance when the deceased prays that he may escape it.⁵ One of

¹ Crum, *S.B.A.*, xvi, 133, translation of a Munich stela of the XIIth dynasty.

² *S.B.A.*, xv, 433.

³ Sphinx, viii, 15.

⁴ Crawford (*Thinking Black*, p. 457) mentions that among the Luba (W. Africa), in a certain village, he found he had a reputation for making the roaring in the mouth to cease. His fame for drawing teeth had preceded him. " Demon that roareth in the mouth " might well be a denizen of the Ancient Egyptian inferno from the Book of the Dead, and many apparently mystic names may have a similar matter-of-fact meaning. For example, ch. lviii. 4, " making the hair to stand on end is the name of the oars." If the lake is Osiris, spray may well be regarded as his hair : hence a suggested explanation of the name of the oars.

The products of the sub-consciousness of the savage and the civilized mystic would not unnaturally have the same family complexion.

⁵ Naville, *B. of D.*, ch. XVII, accounts for the difference of meaning of the words by comparing the English words " hide," " skin," and " hiding," " beating."

these fundamental passages is chapter xvii, 126 following (Budge), and xvii, 79-81 (Pierret), which is accepted by Lefebure and Moret¹ as a reference to Anubis passing over the *Mesqa* skin for Osiris. Budge's translation reads "he who passes through the place of purification within the Mesqet is Anubis who is behind the chest which contains the inward parts of Osiris." The pertinent portion of Pierret's French rendering may be translated "I have traversed the liquid of purification in the place of rebirth . . . this liquid of purification in the place of rebirth is Anubis who is behind the box containing the entrails of Osiris." The true meaning of this important text will be perhaps settled by the German version of the Book which is in process of publication.

The *mesqa* however is associated with an Ancient Egyptian rite which has every appearance of being a skin rite, namely, the *Tekenu*.



THE WAPRA SCENE. See next page.

This, as is well known since Maspero first quoted the name,² is the designation in many of the chapel tombs of the nobles at Thebes, and at El Kab, of an arresting object, roughly describable as pear-shaped, which is dragged by men upon a small sledge in the funeral procession. It is evidently a man, with a bull's hide about him. That it is a hide is proved, taking all the representations of it together, by the colour and markings. The walls of the chapels in the Theban necropolis are so often seriously damaged where the Tekenu sledge would have probably been—namely, near the ox-drawn hearse—that it is permissible to suppose that in the XVIIIth dynasty it played a significant part in the rites, and was represented pictorially in the majority of the larger chapels. The suggestion has been made that the frequency with which one part of the funerary pictures has been marked out for destruction, points to the work of a single objector, probably Akhenaton, and not to personal enmity to the deceased, as in Menna's

¹ Moret, *Mystères égyptiens*. This work is the most exhaustive that has been written on the subject: based mainly on Egyptological material, the classics, and Golden Bough. He argues that qeni, mest, shed (sed) seshed, shedt khen, khensu, are other names for skins of rebirth, local perhaps, other than the bull. If qeni is a hide, the meaning of mesqen seems clear.

² *Mission Archéologie française*, V. II, p. 435. Mentuherkhopeshef.

chapel, for instance. In either case the importance to the deceased of the part destroyed is emphasised by the act of erasure.

The earliest representation of the Tekenu known is that of Antefaker, Qurna (early XIIth dynasty). Sehetepabra¹ is also of Middle Empire date. With the single possible exception of Mentuherkhopeshef, it does not appear in chapels of the XIXth and later dynasties until the Saitic period, nor in the tombs of the Kings.²

But although the archaistic revival of the Saitic brought back Old and New Empire styles of tomb-chapel decoration, the lifeless disjointed manner in which the scenes are displayed are eloquent of ignorance of what they really represent, and there is no reason to suppose that the rites themselves were reintroduced in the old manner.³ The inscription attached to the Tekenu scene throws no light on its significance, nor does the word itself yield any radical illuminating meaning.⁴

The following are the translations given to some of the best known examples :

a. ⁵Antefaker (xi-xii) . . Dragging the Tekenu.

b. Sehetepabra (xii) . . To the West, to the West in peace to Osiris Lord of the place of Eternity.

c. Renni (xvii? El Kab) Dragging the Kenu to this Khent Amenti.

d. Paheri (xviii El Kab) To the West, to the West, the place where thou art, the land of sweet life, I come (? he comes).⁶

The following are at Thebes, and of the XVIIIth dynasty :—

e. Nebamon . . . Dragging the Tekenu to Khentamenti in peace with the people of Pe, Dep, and Hatehe.

f. Amenemhat . . Dragging the Tekenu by the people of Ked (?) and the Sa Serqet priest, *going forth and coming in four times (?)* by the northern nomes (?) (text corrupt).⁷

g. Mentuherkhopeshef, which is of peculiar importance for our subject, is considered separately later.

¹ Quibell, *Ramesseum*.

² The figure on the ox-legged bed in the Wapra scenes before the statue, is considered to be the Tekenu by Budge (*Book of Opening the Mouth*) and Moret (*op. cit.*) on rather insufficient evidence in view of Maspero's very convincing translation of the text, and the general nature of the Wapra rites (Maspero, *Revue de l'histoire des Religions*, 1887, p. 164).

³ In Ramesside and later times the rites centred about the Tekenu Maspero suggests (Mentuh, *M.A.F.*) may be the theme of the curious vignette to ch. 168, *Book of Dead*, and stela C15 Louvre. Illustrated Moret, *op. cit.*, pp. 56 and 64. Ancient public rites naturally devolve into secret mystic cults.

⁴ Moret translates an inscription in Renni as "he who passes under the skin is this imakhy Renni," whereas Griffith (Tylor, *Renni and Paheri*) takes the word "khensu" (skin according to Moret) in the usual sense of "travelling." A figure in a leopard's skin stands on the sledge and a man pours "water and milk" in front of it. A damaged part of the scene, however, appears to represent, as Moret remarks, a woman draping a man in a long garment in a shrine on the sledge. See Appendix.

⁵ References to above chapels are : a. Davis, Antefaker. b. Quibell, *Ramesseum*. c. Tylor, Renni and Paheri. d. *idem.*, and Naville and Griffith, Ehnas and Paheri. f. Davis, and Gardiner, Amenemhat. g. Maspero, Mentuherkhopeshef, Missn. A. Français.

⁶ Moret renders this : "land of renewal of life" (*uhem ankh*). But Tylor and Naville both copied it "nozem ankh." Moret relies very largely on his rendering of these two texts.

⁷ This text was restored by Gardiner from Menkheperaseneb which is of the same type but also damaged. The peoples mentioned in these texts appear to be denizens of a heavenly Delta whose living forbears accompanied Osiris on earth. For Sa Serqet, and the theory that the serqet-like object is a human skin, v. *op. cit.* under f. and Petrie, *Apries, Egyptian Res. Account*.

In Rekhmare the sledge-drawn Tekenu does not appear, but one may be sure it occupied its place on the surface which has been broken away.

Above we dealt only with the sledge-drawn Tekenu.¹ He is also shown in several chapels lying face downwards wrapped in his egg-shaped skin, on a bull-legged bed.² The same scene, without inscription, occurs in Sennofer, where a rope held by men, and the front of a sledge, alone remains of what was probably the sledge-drawn Tekenu. In Rekhmare the inscription reads "Bringing to the city of the skin (*Meska* with skin determinative) as a Tekenu one who lies under it in the pool of transformation." Here is another of the few tangible pieces of evidence that the Tekenu on the couch is engaged in a skin rite of some kind, as *Meska* here very clearly indicates.

The following are the usual concomitants in other chapels where it is shown more or less fragmentally and without inscription. Two men stand at either side of small twin-altars facing each other. One hand of each hangs next the edge of the altar nearest him: the other arm of each is raised above the altars towards his companion's. A double stream of blood (?) flows arch-wise under the raised arms over the outer edges of the altars. Next to them a man digs with a large scythe-shaped mattock. Behind him two men stand with their arms raised as over the altars, but these latter are replaced by two small obelisks. Beyond them again, a girl kneels towards the previous scenes at a small altar with pots containing wheat and "bread wrapped up" as superscriptions indicate: *bit* and *taou* respectively. Over her head is the legless carcass of a bull, which bears a general resemblance in shape to the Tekenu on the couch. Virey,³ who has studied all the elaborate funerary scenes in detail, and puts upon them, in their entirety, a rather involved mystical interpretation, sees in the groups just described part of a symbolical representation of incidents in the story of Anpu and Bata (The Tale of Two Brothers). The blood of the bull into which Bata was changed became two persea trees, and these are represented by the obelisks. That the story conceals an ancient Osiris myth is undoubted: the Bitau (Bata) bull is a form of Osiris, "the bull ever born afresh."⁴ The offering of the *bit taou* pots, the corn mixed with earth and spices for germination,⁵ the bread representing the body ready to be resuscitated, fit suggestively into a mystical and magical resurrection drama-rite. The evidence is, however, on the whole inconclusive and the rest of the scenes which fill the wide wall space in the corridor of Rekhmare's chapel, in spite of names of officiants⁶ and inscriptions, leave the uninitiated as unenlightened as before; such was probably the intention. The fact that inscriptions occur without scenes, or attached to the wrong scene, and scenes are without inscriptions, and that in no two chapels are the scenes in

¹ Moret's reason for regarding the swathed figure as the Tekenu in the Neferonpet fragments (Capart Donation, Museum de Bruxelles) is not evident.

² There is an object in the Eastern Upper Gallery of Cairo Museum very much like an ox-hide rolled into a ball. It rests on a bed of similar form to the above.

³ Virey, *Rekhmare, Mission du Caire*, V. 1.

⁴ Anpu and Bitau were worshipped at Letopolis. Lefebure.

⁵ Virey, *op. cit.* That this interpretation of the pots is correct is borne out by the Dendera inscriptions relative to the Osiris cult. Moret, *Revue de l'H. des Rel.*, 57, 87.

⁶ In Mentuherkhopeshef at least twenty different officials take part, but their titles, as in Rekhmare throw no light on their actions or duties.

the same order, or are all the same scenes shown, render elucidation of the mystery of Egyptian funerary ritual at present impossible.

In the list of tomb-chapels from which material has been drawn for the purposes of this study Mentuherkhopeshef was reserved above for special consideration separately. The scenes have been carefully studied by Maspero and Davis. The difficulty of decipherment has been increased in recent years, as Davis found that the walls had suffered considerable damage since the artist whose drawings Maspero employed made his visit, and that his work is not to be relied upon in view of the errors which he (Davis) has discovered. There is no internal evidence of the date of this chapel. Maspero places it early XIXth from the resemblance of the style to that of Seti's tomb walls, and from the name "Tasuit" of his wife. Davis implicitly regards it as of early XVIIIth, from the style, and from the fact that the only other chapel containing remains of similar scenes is that of Amenemhat, of which sufficient remains to date it by a cartouche to Amenhotep II. It was only recently discovered, and Maspero would have had to weigh it against the evidence of the name Tasuit. This chapel presents many unique and remarkable features in connection with the Tekenu. He is shown leading the procession in front of the ox-drawn hearse. He is not clothed in the skin, and crouches on hands and knees on what appears to be the edge of the sledge; *i.e.*, the sledge is drawn on edge. This has been interpreted to mean that he is lying on his side. In front of the oxen is a shrine containing a ram and a large zad emblem.¹ Over the Tekenu is written "Come drag the Tekenu that he may depart to his city." His sledge is drawn by men in the usual way. Another inscription at this stage reads, "M. coming to see the Tekenu being brought (dragged?) and the ointments conducted to the mountain top(?)." These ointments or oils are on a sledge between him and the oxen. On another part of the wall, over the Tekenu, still on the sledge, is read, "M. coming in peace to see the dragging of the Tekenu on his sledge." "The Tekenu enters" is above a walking figure in front of M., and "the Tekenu sets out" over a sledge drawn by men as before. In front of the four men who drag it is a feature, on which the bad state of the wall, and the doubtful accuracy of the artist above mentioned, cast some doubt. The latter represented it as a large skin, held up by a man, with the work Meska² written over it. A tail remains, however, and does a good deal to restore confidence. In fact it can hardly be doubted that it was as shown in the drawing reproduced by Maspero. At this stage then it would appear the Tekenu was wrapped in the skin, and then set out again in the manner more commonly represented; having reached the city for which he had departed, in the skin.³

¹ Griffith (Mendes) considers that the straight horned ram really represents a goat, classical writers being unanimous that the goat was the sacred animal of Mendes. Durst (*Lortet, Gaillard Faune Mommifère*, p. 107) thinks that the goat replaced the straight-horned ram in the New Empire in the Mendes cult. Lortet's opinion is that the ancient writers confused the straight-horned ram and goat, and that the former only replaced the ram in Ptolemaic times. The fact that the goat was sacred to Dionysos whose cult is traced to Egypt, as well as the bull, weighs in favour of Durst and Griffith. But there is apparently no other evidence that the goat was sacred to Osiris as well as the bull. As god of herds as well as agriculture, one would expect to find it.

² Meska written with the ka sign suggests that the skin was a regenerator of the spirit.

³ In adjoining registers there is a picture of a man flaying a bull. Another man holds the horns of an animal's head, to which is attached the hide. This is clear from the inscription "putting a *skin* behind him." Davis translates "em sa ef" as "behind him." Perhaps "on his back" is a possible rendering:—with reference to the Tekenu?

No useful purpose would be served by describing the scenes on the two upper registers,¹ in which now and then we get details reminding us of some of the more stereotyped ceremonies seen in Rekhmare and elsewhere. Men digging with the large mattocks before described and several large holes (represented as circles) in two of which are bulls, several slaughtered cattle, and goats evidently being driven to the slaughter constitute their subject.²

In the lowest register, however, below the *Meska* skin, is the scene for which this chapel is famous. Two men kneel facing one another. About their necks, or rather across their necks, are short ropes, the ends of which are held by four men, two to each kneeling figure. Here is evidently a scene of real or mock strangling. Over the heads of the standing men is the *sekhem* sign of power. The kneelers are "Nubian Anu," and above each of them is a crenelated cartouche containing the double sign *kes* or *keres*; each cartouche being supported by two small kneeling figures. To the right of the group two figures lie extended: "laid aside" or "laid on their side." Beyond them again is a pit containing a sledge, towards which two men are bearing the object in question. To the left of the group is a fire-encircled pit containing the word "Tekenu," above signs representing the hair, heart, haunch and hide of a bull; the hide following and perhaps forming a word-group with the word "Tekenu."

The above scene is well known as a unique representation of human sacrifice, or a ceremony which is the survival of it. Moret considers it an actual sacrifice and of the Tekenu, Maspero and Davis consider it very probably the real thing, but not proven; but the latter leans to the side of the mock ceremony more than the former. Davis considers the crenelated cartouches containing the word *qeresui* or *qasui* (*qasi*) to be the name of the place the Anu came from. Maspero inclines to the view that they are destined to be "swathed" and therefore for death in the rite. That the word in the crenelated cartouche is not necessarily a "city name" is shown by the form of a pit containing "black hair" besides which a man is digging with a large mattock; which is of identical shape.

There is a clue perhaps to the reason why such a barbarous practice—of which, however, Egypt with all its high civilisation was not entirely guiltless—should have been introduced into Egyptian funerary ritual and proudly recorded for posterity in this way. One of M.'s titles was "King's Son"; another "Fan Bearer on the King's right hand." He was also Governor of the Southern Nomes. King's Son Governor of the Southern Lands was the best known title of the Governors of Kush in the XVIIIth dynasty. But King's Son, Fan Bearer, etc., was also the title of some of the Governors.³

Reisner's excavations at Kerma in the S. Sudan showed that Hepzefa of Assiut, Governor of Kush in the XIIth dynasty, was buried at Kerma in a

¹ The walls are divided into three registers, partitioned off by vertical lines.

² In connection with the pits, goats, and slaughtered bulls, the following is of interest described by Tremearne (*Ban of the Bori*, 33) which is the continuation of the sacrifice of bull and goat, and skin dance (*v.* above):—On the 4th day another bull was sacrificed and the 7th day, midnight, a he-goat; every part of this except the flesh being buried in the hole made for the bull's blood. The worshippers washed their hands over the hole. (The magic influence was not to be brought into the house.)

³ *v.* Gauthier, *Fils r de K.*, *Recueil des Trav.*, xxxix, p. 179 *seq.*, criticising length of rule of Reisner's list. (Reisner, *Sudan Notes and Records*, I, iv, 231) Davis calls M., Viceroy of Kush, but gives no reason for so doing. His name does not occur in Reisner's or Gauthier's list.

tumulus in which was discovered upwards of 350 human skeletons grouped about the body on its couch and in the passages.¹ A similar custom appears to have been perpetuated in the Sudan until as late as 1350 A.D.²

It is a plausible reason at any rate to account for the unusual scenes, in spite of the legend "the Prince coming to see the procedure practised in Kenemt." This is the name both of Kharga Oasis and Diospolis Parva in the Delta, as well, apparently, as a spiritual region like Dep, Pe, and the rest.

Was he Governor of Kharga, and did such practices prevail there also? In any case, whether the *Qasi* are human sacrifices or not, there is no reason to imagine that they and the Tekenu are the same, or subject to the same treatment.³ This is the opinion of both Maspero and Davis. Nevertheless the Tekenu is, on the strength of the *Qasi* reliefs, spoken of by a number of writers as a supposed or possible human sacrifice.

It is not certain in what order the registers should be read. It may be that the Tekenu's hide is burned in the pit with the hair of the bull, and that the procession in which his sledge precedes the ox-drawn hearse,⁴ which is the bottom register of all, is the representation of the final stage of the journey to the mountain chapel, and that M.'s Tekenu goes to it skinless; having completed the ceremonies at the chapel in the plain below designed for these rites. On the other hand, the remains of the hide of the bull from which the Tekenu's skin was taken, together with the other portions of the animal, may have been burnt in the pit; the designation "Tekenu" applying to the remainder of the hide, or perhaps to the animal which supplied the hide for him. The suggestion is often made that at the last moment the bull is substituted as a victim for the Tekenu. But, as Davis notes, there is nothing in the inscriptions in other chapels to suggest that there is an element of sacrifice at all about the Tekenu. He usually accompanies the hearse-sledge, preceded by dancers to perhaps the cry of the legend "to the West, to the West, the land of sweet life." The concluding words in Paheri, "I come" or "he comes," might, of course, be taken in a sinister sense, but the tomb may be meant. Moreover, the inscription, which is similar to one often written over the ox-drawn coffin, may, in Paheri, be an instance of a legend written to serve instead of a scene, for the coffin sledge and ox-team are not shown, no doubt on account of the small dimensions of the chapel.

To summarise: the following is a suggested explanation of the rôle of the Tekenu, based upon examples of skin and analogous rites quoted from various sources above.

There is clear evidence that the skin played its part in Egypt as a vehicle of magic power, which a human body could absorb by contact with it. The rôle of the Tekenu was to come out of the skin as he lay on the couch. He possibly

¹ Reisner, *op. cit.*, Vol. I, ii, 68.

² Baker, *Ismailia*, Vol. II, 205, quotes the Arab historian Ibn Batuta, whose informant was an eyewitness of the burial of a chieftain, at which many servants and some 30 notables were buried with him; he himself had been selected for the honour but had been able to buy himself off.

³ In Amenemhat the funeral cortège with bull-drawn hearse is depicted in the bottom register with the Tekenu above it. In Mentuherkhopeshef Antefaker (and probably) Rekhmare, both are (were) in the bottom register. In Anena, Tekenu is in bottom register, cortège not shown. In Horemheb, Nebamon, Ramose, Renni, cortège and Tekenu are in topmost register.

⁴ The chief argument against the identity is the obvious one that there are *two Qasi*.

played the part of Anubis who seems to have performed a similar rite for the dead Osiris.¹ By contact with a sacrificial bull-hide, the Tekenu is the Bull: the Bitau Bull, and when he emerges he is born, like an embryo issuing from the womb, as the bull.²

This idea is a natural development from a complex of ideas depending on an implicit belief in the real, almost material potency of the skin; analogous to the development which resulted in a ceremony like the Indian *diksha* described above: the skin represents a kind of uterus, like the Indian antelope skin. The *prana* of this Bitau Bull—the spiritual counterpart of which is brought into being by the acts of the Tekenu thereafter—and all the rites associated with him, react on behalf of the deceased, who himself is thus enabled to revive in his new environment by “sympathetic action.” The blood of the bull whose hide covers the Tekenu also plays its part in the drama and causes the persea trees to spring up.³ The bull is dead but the potent *prana* of his skin can materialise a spirit bull, incarnated temporarily or when required for the purpose of the drama, in the Tekenu, who lives and moves and acts: the blood plays its own and equally important part. “Transformation” or “becoming” (*kheper*) as a function of the skin (the bed or skin being the lake where the Tekenu lies) is thus intelligible.

In the XVIIIth dynasty another striking rebirth or resurrection rite was employed, perhaps simultaneously with the Tekenu, as an extra reinforcement of power. This is the corn-growing practice, a development no doubt of the other corn-germinating rites, practised in the Osiris temple ritual, which almost certainly forms the subject of pot-offering scenes and other pictures which are met with on the tomb-chapel walls. This is the Osiris corn figure, formed by seed grown in an earth-covered figure of Osiris drawn on canvas, or in other ways. Corn was grown from seed-filled models of Osiris in mud and spices⁴ to promote the crops. By an easy transition of ideas, familiar to us from St. Paul's allegory, the life-giving principle was transferred from vegetable life to human life. Each individual seed was a corpse, capable by the magic of water and soil of producing life: the seedling is born out of the grain. When once the close parallel with human life and death seized men's minds it is easy to understand why the vegetative rite should have superseded the animal; the latter being relegated to an esoteric mystery sublimated so as to be hardly recognisable.⁵

Why is not the Tekenu shown in the funerary scenes in the tombs of the Kings? A plausible answer is, that the King was Osirified in life and therefore there was no need for the funerary rite. A good deal of evidence has been

¹ In tomb chapel 54 Qurna, there is a picture of Anubis being dragged on a small sledge by men, with a chest which is perhaps the chest of oils which generally accompany the Tekenu. Anubis's head also appears above the destroyed area over the small sledge referred to previously as probably the Tekenu's.

² The mes root in *mesqa* is significant. For discussions of other manifestations of the part played by emblems of the concomitants of birth in A.E. ritual, *vide* Blackman, *J.E.A.*, iii, 235, and Seligmann and Murray in *Man*, XI, 11, 97, also Moret, *op. cit.*

³ For other possible indications of Bitau elements in the ritual, *v.* Davis, *Five Theb. Tombs*, p. 16, models of the bull, fish emblem, olive tree representing the persea flower, or reed-crowned men representing the soul-flower. These are at present unique scenes occurring in Mentuh. and Amenemapt only.

⁴ Fraser, *Adonis, Attis, Osiris*, 321, 324 *seq.* Moret, *Revue de l'Hist. des Rel.*, lvii, 87.

⁵ Moret, *Mystères*, pp. 56 and 65.

established to show that the Sed festival was fundamentally a rite of Osirification.¹ In the scenes representing the King, from Den onwards, he is always shown in the tight-fitting shroud of Osiris, holding the flail. Now on the North Wall of the Birth House of the temple of Amenhotep III at Luxor, there is, almost certainly, among the almost defaced sculptures a representation of the Tekenu lying on a sledge, entirely wrapped in the skin.² On the East wall the Sed festival scenes are displayed.³ The King follows the sledge with a long rod held horizontally, directed towards the Tekenu. He is probably about to strike him, but the action does not necessarily imply violence. Purification is a much more likely object.⁴ Campbell regards this scene as referring to "ceremonies required to be performed to ensure the new birth celebrated on the East wall." The scene does not suggest two consecutive acts: namely, that the King himself is in the skin. It is more likely that the rebirth rite is being performed by deputy; an interesting link in that case with the similar rite performed for the dead.⁵

Frazer, in support of the theories he advances to explain the customs and rites he deals with in the *Golden Bough*, justifies his appeal to analogous rites in other parts of the world in support of his explanations by an argument which with the change of a word applies fittingly to this study. "The positive and indubitable evidence of the prevalence of rites in one part of the world, may reasonably be allowed to strengthen the probability of their prevalence in places for which the evidence is less full and trustworthy."

E. S. THOMAS.

¹ Moret, *Mystères*, 73 seq., 188 seq. C. Campbell, *Miraculous Birth*, 79.

Petrie, *Apries*. Murray, *Man*, xiv, 2, 12. The last two writers would contend that the Sed festival took place when the Crown Prince took up the regency with his ageing father, and that the Osirification replaced the killing of the King. The drama would be completed by the burial of a statue of the King. The large Osiris statue of Mentuhotep IV (?) from the hill-tomb behind the Mentuhotep temple at Deir el Bahri, has been referred to in this connection by Professor Petrie.

² Campbell, *Miraculous Birth*, 73.

³ Gayet (*Luxor Temple*, M.A.F.) thinks the object on the sledge is the trussed Bitau bull. But Campbell could find no trace of the requisite bodily features.




⁴ *cf.* Frazer, *G.B.*, ii, pp. 215, 216, 233, for examples of ceremonial "striking" to dispel bad influences; to make healthy, and to purify generally, living things and inanimate objects.

⁵ Campbell says that at Soleb the King and his *Ka* are dragged into the Hall of Eating wrapped in skins, on sledges, but I have not been able to find the scene on the plate of the publication of Soleb temple. If this is so, a Tekenu rite would appear to have persisted in temple ritual long after it ceased to figure in funerary ritual: *i.e.*, after, roughly speaking, the end of the XVIIIth dynasty.

APPENDIX.

The following are passages in the Book of the Dead (Budge) in which the word Tekenu occurs, with the exception of No. 5.

- (1) 58.2. Separate thou from him head from head when thou *goest into* the divine Mesqen chamber.
- (2) 64.6. Hail ye two hawks who are perched upon your resting places who hearken to the things said by him who *guides* the bier to the hidden place who lead along Ra.
- (3) 64.11. Make thou thy roads glad for me and make broad for me thy paths when I shall set out from earth for life in the celestial regions. I am one of those about *to enter in*. (Addressed to Ra.)
- (4) 64.27. *I have come* as the envoy of my Lord of Lords from Sekhem to Anu to make known to the Bennu bird there concerning the events of the Duat.
- (5) 72.7. I know also the name of the mighty god before whose nose ye set your celestial food and his name is Tekem. When he opens up his path in the Eastern heaven may he carry me along with him. Let not the Mesqet make an end of me let not your doors be shut in my face because my cakes are in the city of Pe and my ale in the city of Dep, and there in the celestial mansions of heaven which Tem has established let my hands lay hold on the wheat and barley.
- (6) 78.3. Let not him that would do me harm *draw nigh* unto me.
- (7) 100.11. If this be done for the deceased he *shall go forth into* the boat of Ra every day.
- (8) 125.4. . . . my protector (?) *advanced to* me and his face was covered and he fell upon the hidden things.
- (9) 149. VIII. 4. *The 8th Aat*. The name of the god therein is Qahahetep and he guards it gladly so that none may *enter*. I am the Ennur bird . . . IX and I have brought the possessions of the earth to the god Tem.
- (10) 149. IX. 6. *The 9th Aat*. He has made the city so that he may dwell therein at will, and none can *enter in* except on the day of great transformations.
- (11) 149. XIII. 6. The gods and the khus though they wish to *enter* into them cannot do so.
- (12) 169.13. Thou shall keep away from thee death so that it shall not *come nigh* thee.

The word Tekenu  (also spelt thekenu, kenu , ) is rendered *approach* in the dictionaries, and is, as will have been seen, translated in this sense by Budge in the above passages; transitively in No. 2.

In 6, 7 and 12, this seems the obvious meaning; 9, 10 and 11 perhaps also. In 1, 2 and 8 the obscurity of the text seems to suggest that the word may be used in another hidden sense. No. 1 is especially interesting, as the word taken

is immediately followed by the "skin" word Mesqen, and Lefebure (*S.B.A.*, *loc. cit.*) has drawn attention to it as a reference to the Tekenu. Nos. 2 and 4 are from one of the oldest chapters of the Book, and are sufficiently obscure to make it probable that the true sense has not yet been discovered.

In 6 out of the 11 passages above quoted there are references to Sun gods or their emblems, the hawk and the bennu bird.



Tekem is mentioned nowhere in the Book except in the passage quoted under No. 5. and is clearly a name of a Sun god. Is it possible that the final syllable was *nu*? It will be noticed that the Mesqet is referred in the context, as well as the inhabitants of Dep and Pe who accompany the deceased's ox-drawn hearse, with the Tekenu, according to some inscriptions, as we have seen (*v. pp.* 14 and 20). Tem is also mentioned, the old sledge-drawn Sun god. The sledge-drawn Tekenu would thus be a solar rebirth ceremony.

Two derivations of the word Tekenu have been suggested; both of sinister import: viz., Maspero's (Mentukh, *M.A.F.*) *tek*, to cut up, and *nu* formative and Lefebvre's Tektenu Libyans (*Sphinx*, 8, 5).

WAS APRIES OF ROYAL BLOOD ?

THE XXVIth dynasty consisted of the following kings (Petrie, *A History of Egypt*, Vol. III, p. 325) :—

							B.C.
Psamtek I	..	..	..	..	..	54	664-610
Nekau	..	..	..	..	..	16	610-594
Psamtek II	..	..	..	..	..	5	594-589
Uahabrā (Apries)	..	..	..	..	..	19	589-570
Aāhmes	..	..	..	..	..	44	570-526
Psamtek III	..	..	..	..	..	1	526-525

It has long been accepted on the authority of Herodotus that Nekau, Psamtek II, and Uahabrā (Apries) were the son, grandson and great-grandson respectively of Psamtek I ; and more recently the evidence of the Second Adoption Stele has been regarded as establishing conclusively that Apries was the son of Psamtek II. It will therefore be convenient before putting forward the grounds on which this view may be doubted, to consider what the evidence really amounts to. The Second Adoption Stele informs us that Psamtek II died in his viiith year on the 23rd of the 1st month, and that “ thereupon his son () Apries rose up in his place.” The question is whether the word here translated “ son ” implies physical relationship, as has been assumed. There is well-known evidence that it does not always do so, but into this we need not enter, since the stele goes on to say that Nitocris died on iv.12.4. of Apries, and her daughter () Ānhknesneferabrā carried out all the ceremonial of the burial.¹ Now the two Adoption Stelae have demonstrated, what had been conjectured before their discovery, that the succession to the Theban principality was kept up by adoption. Ānhknesneferabrā (daughter of Psamtek II and Takhuat) was the *adopted* daughter of Nitocris, just as the latter (daughter of Psamtek I and Mehitenusekhit) was the adopted daughter of Shepenapt. We thus see that the mere use of the words which we customarily translate by “ son ” and “ daughter ” does not compel us to believe in a blood relationship if there is sufficient evidence to displace the normal meaning.

The primary ground for not accepting the ordinary meaning in this case is that the hypothesis of adoption enables us to explain an anomaly, which it is believed has never been satisfactorily accounted for ; viz., that Uahabrā, the throne name of Psamtek I, is the *personal* name of his supposed great-grandson Apries. No parallel case occurred in the whole course of Egyptian history, and surely we are entitled to look for some very unusual cause to account for it. The learned Dr. Hincks, of Dublin, discussed the problem as far back as 1855,

¹ Gauthier, *Livre des Rois*, Vol. IV, pp. 94, 105.

and came to the conclusion that Apries received his name because he was born in the reign of Psamtek I.¹ It is almost certain that this was so; but Dr. Hincks did not explain why this particular prince was given the throne name of the reigning monarch when others were not. A personal name was often repeated within the same dynasty, and a throne name might be repeated after a long interval in a different dynasty; but there is only the one instance of a king's throne name becoming a later king's personal name. Why? All kings must, except in periods of chaos, have been born in somebody's reign; and it was therefore clearly the rule that princes of the blood were not named in the way so common among the nobility. This is precisely the rule that would be expected to prevail, if only as a matter of convenience. We are therefore forced to one of two conclusions: that the rule was departed from in this one instance only, or that Apries was the son of some high officer, who named him, after the manner of his class, in honour of the reigning Pharaoh. It is submitted that the latter conclusion is by far the more probable.

The circumstances of the times and of the persons are consistent with our hypothesis. Egypt, no longer dominating the neighbouring nations, was in danger from more than one quarter; and there is every probability that Psamtek II left no son of sufficient age to take command in the field. This seems to result from what we know of his daughter Ānkhnesneferabrā. She was alive in the short reign of Psamtek III,² some 70 years after her adoption by Nitocris in the first year of her father's reign, and may of course have lived longer. Assuming her to be 80 years old at this time, she would have been 10 years old at her father's accession, and therefore about 15 to 16 at his death.³ It is quite possible that any son he may have had was even younger, and there was not likely to be a son very much older. What more natural than to provide by adoption, or even by pretended adoption, for the succession of a king capable of commanding the national forces? It will be seen from the list of the dynasty that anyone of suitable age to discharge this office must have been born in the latter part of the reign of Psamtek I; and, other things being equal, such believers in omens as the Egyptians were would be likely to give the preference to one who bore a royal name. Finally, if Apries, having no claim by descent, were chosen for military reasons, his overthrow by Aāhmes, when he had been found incapable, would be regarded with far less disfavour than a revolt against one who had succeeded to the crown in ordinary course.

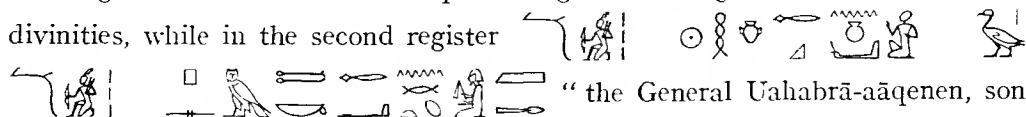
And there is a yet further confirmation. Not only does the name of Apries suggest that he was not of royal birth; not only do the circumstances existing at the death of Psamtek II render an adoption highly probable; but there has been fortunately preserved to us a record of a man who fulfils in the most striking manner all the requirements of the situation. A very interesting

¹ *Transactions*, Royal Irish Academy, Vol. XXII, pp. 432-3.

² *Annales du Service*, Vol. VI, p. 131.

³ Although Psamtek II lived into his seventh year (dying on the 23rd day), he had probably not reigned much longer than five full years. Prof. Breasted has argued (*Ancient Records*, Vol. IV, p. 502) that the adoption of his daughter by Nitocris was a political device that would probably be carried out as early as possible in the reign. If this be so, Psamtek would have come to the throne not long before the eleventh month, his daughter having arrived at Thebes from Saïs on i.11.29. With this agrees the earliest known date of the reign, i.11.9, when the Apis was installed which was born on xvi.2.7. of Nekau, doubtless in the same calendar year.

find of bronzes at Mitrahiny (the site of the ancient Memphis) described by M. Daressy¹ includes a plaque greatly injured but still in large part legible. The first register shows Psamtek II presenting an offering of incense to certain divinities, while in the second register



“the General Uahabrā-aāqenen, son of the General Psamtek-aāneit deceased,” stands in adoration before an altar bearing offerings to Amen, Mut, Khensu, Mentu, and Tum. We thus learn the following facts:—

(1) Uahabrā-aāqenen was a general, and the son of a general. He did not bear the military title associated with other offices: it was his *only* title. We may therefore conclude that he was of military stock, and that he, like his father before him, made soldiering the serious business of his life.

(2) He was living and holding high office in the reign of Psamtek II. It is important to observe that the plaque is not at all of a funerary character. It was one of eight objects in the same find, all clearly dedicated in a temple as a means of securing the divine favour for living persons.

(3) The general Psamtek-aāneit was born in the earlier part of the reign of Psamtek I and received the king's personal name. When his son Uahabrā was born in the later part of the reign, this son was given the king's throne name. This hypothesis alone will fit the facts.

If it be permissible to look for the future king outside the royal family, no other candidate for the position so eligible as this one is ever likely to be found.

F. W. READ.

¹ *Annales du Service*, Vol. III, p. 139, and Plate II, Fig. 1.

THE OBELISKS OF PYLON VII AT KARNAK.

AN article has appeared in the *Annales du Service*, Vol. XXII, p. 245, by M. M. Pillet, Director of Works for Karnak, in which he carefully estimates the height of the two large obelisks which stood before the pylon which we know as Pylon VII. He arrives at 51 metres for the height of these obelisks by calculation, which he cuts down to some 46 metres as the probable height. To me, this seems an over-estimate.

Let us set out the problem, much as the scribe Hori in ancient times put them to the scribe Amenemôpet :—Before Pylon VII we have the base of an obelisk of unknown taper and height. The obelisk dates to Tuthmôsis III. Find the height.

M. Pillet tackles it in this way (I translate from page 245) : “ The obelisk must have been much larger than the standing obelisk of Hatshepsôwet. Actually, the south side of its base, which is still intact, measures 3·17 metres, while the mean of the sides of the base of that of Hatshepsôwet measures 2·44 metres and that of Tuthmôsis I 2·107 metres only. The difference of heights of the obelisks of Hatshepsôwet and Tuthmôsis I is, in round numbers, 10 metres (29·50 metres and 19·60 metres), that of their bases 0·34 metre *or 34 millimetres per metre* (difference in height ?). Applying these figures to the obelisk of Tuthmôsis III, which measures at its base 724 millimetres more than that of Hatshepsôwet, one finds 51·77 metres for the total height.”

Generalised, this is equivalent to saying that, if the difference in the height of two obelisks of very different taper¹ correspond to a certain difference of base measurement, then the difference in height between another obelisk of unknown taper and the larger of the two known obelisks is proportional to the difference in their bases !

The height, on this assumption, appears to have been calculated as follows :—

A base difference of 34 millimetres corresponds to a difference in height of 1 metre.

Therefore 724 millimetres will correspond to a difference of $\frac{724}{34}$ or 21·3 metres.

Hatshepsôwet's obelisk is 29·50 metres high, therefore Tuthmôsis III's obelisk must be $29\cdot50 \div 21\cdot3 = 50\cdot8$ metres.

Have we any other obelisk of the same date having a base large enough to make a useful comparison with that of Pylon VII ? That now known as the Lateran Obelisk has a base of 2·87 metres.² Let us apply the above calculation to this obelisk, assuming that its height is to be determined from its base-measurement ; here the difference in base measurements is 430 millimetres, so that its height will be $\frac{430}{34}$ or 12·65 metres higher than the obelisk of Hatshepsôwet, making a total height of 42·15 metres. But its height is 32·15 metres only.

¹ By taper I mean the number of units of height required before the obelisk decreases one unit in width.

² Gorringer, *Egyptian Obelisks*, p 145.

On the obelisk of Aswan there is the outline for a smaller obelisk, which it was proposed to extract when the original scheme proved to be impossible owing to the granite being flawed (see my *Aswan Obelisk*, p. 8). The base of this is almost of identically the same size as that of the obelisk before Pylon VII; moreover, the width just below the pyramidion is 2.02, while that of Pylon VII is found, from a fragment, to be 2.08 a trifle lower down the shaft, yet this obelisk is only 32.10 metres high.

The late M. G. Legrain's calculation of the height of this obelisk is correct only if it is assumed that its taper was the same as that of Hatshepsôwet, and that it was *similar*¹ to it in Euclid's sense. This assumption was not justifiable, as the Queen's obelisk tapers 1 in 42.8, which is far less than any other known obelisks, whose mean taper is about 1 in 28. Legrain estimated the length of the obelisk at 37.77 metres,² which M. Pillet comments on as being an underestimate.

As I have pointed out in *The Aswan Obelisk*, p. 42, all known obelisks could have been supported at any point in their length without breaking owing to the stress set up internally due to their own weight, and in *ANCIENT EGYPT*, 1922, Part IV, I show that, if the upper part of an obelisk now at Constantinople formed part of the problematical 108-cubit (56.7-metre) obelisk mentioned in the inscription of Thutiy,³ then the stress set up, if supported at its centre of gravity, would be far in excess of the ultimate breaking stress of granite.⁴ In other words, it would do what a ship often does in an ice bank, and that is break in two. If we assume that, in the adventures of an obelisk between its quarrying and its erection, it never was liable to be supported for an instant at its centre or its ends, then we must look upon obelisks as evidence, not of clever engineering, but of magic.

Taking M. Pillet's most conservative estimate of 46 metres for the height, let us assume the top and bottom bases to be 2.08 and 3.2 metres (that is a slightly stronger obelisk than that which he assumes was erected) and find what stress is set up when the obelisk is supported at its centre of gravity. I will not give this extremely wearisome calculation at length; a similar one is given in full in the volume on the Aswan Obelisk on page 42. The stress which would be set up in the 46-metre obelisk would be more than 1950 pounds⁵ per square inch. Granite, if free from flaws, breaks at 1500 pounds⁶ per square inch.

It will be seen from the above remarks that (a) mathematically, (b) by comparisons with known examples, and (c) mechanically, the calculations given in M. Pillet's article might be questioned.

Though obelisks seem to have no very definite relation between base and height as was the case of pyramids, where the height is about equal to the radius of a circle having a circumference equal to the circuit of the base, yet all obelisks, about which I have notes, have their height between 9 and 11 times the length of the base, with the sole exception of Hatshepsôwet's obelisk of which the height factor is 12.3.

¹ It should be noted that obelisks having the same taper are not necessarily *similar* to (that is scale-models of) one another; further obelisks, whose upper portions are identically equal, cannot be similar unless the obelisks are of equal length.

² Legrain, *Annales du Service*, Vol. V, p. 12.

³ Breasted, *Ancient Records*, II, p. 156.

⁴ 2,560 pounds per square inch (180 kg. per square cm.).

⁵ 137 kg. per square centimetre.

⁶ 105 kg. per square centimetre.

When M. Pillet informed me that he estimated the height as over 45 metres, I pointed out on my plan of the Aswan Obelisk the outline of the reduced scheme, and its close resemblance to the Lateran Obelisk and the base of the obelisk of Pylon VII. It may be that his proofs had been passed before his statements could be amended.

R. ENGELBACH.

[The simplest point of view is that most obelisks have a height which is between 9 and 11 times the base. The obelisk of Tahutmes III, at Karnak, was probably therefore between 28·5 and 35 metres, 94 and 115 feet, high ; so it need not have exceeded the Lateran Obelisk.—F. P.]

[Correction to ANCIENT EGYPT, 1922, p. 102.

I have been checking the calculations in my article on the Constantinople Obelisk, which appeared in ANCIENT EGYPT, as I have long suspected that an error had somehow crept in, since the figure of 5120 lbs./sq. in. seems so very excessive. I find that, by a slip, I have calculated the stress-formula using the Moment of Inertia instead of the Modulus of Section, which is *one-sixth* the cube of the depth of the obelisk and not, as written, *one-twelfth* the cube. This makes the stress set up exactly one half of that given, namely, 2560 pounds per square inch.

This error does not occur in my volume on the Aswan Obelisk, and I am quite unable to account for my lapse. Fortunately, the error does not in any way affect my argument that the Constantinople Obelisk is not part of the 108-cubit obelisk of Thutiy.

R. ENGELBACH.]



REVIEWS.

Egyptian Art.—By JEAN CAPART; translated by W. R. DAWSON. 1923. Large 8vo. 129 pp., 64 pls. (Allen and Unwin.) 16s.

This work is introductory to the general study of Egyptian Art, explaining what should be the common stock of knowledge before entering on the details of monuments. The country, its historic setting, the growth of the art, and the various elements of the architecture are each set out. All this is excellent for the beginner, and worth noting by the student who knows more. There are some points in which it would have been well if the translator had asked for more precision. It must be very confounding to a beginner to find early works spoken of as debased imitations of later designs (p. 53); or prehistoric drawing as a crude rendering of one of the usual figures of late times (p. 53); or the prehistoric knife handle of Gebel Arak described as "imitating the productions of a more accomplished art." Considering that nothing in Egypt before or for centuries after that carving is in the least comparable with its beauty, and that the motives are certainly of foreign origin, the whole treatment of it seems misleading. Regarding the use of bronze, it is certainly not common in the Middle Kingdom, and probably the use of metal statues is as old as Khosekhemui (p. 95). It is rather awkward to say that the Nile soil is incapable of compression, in reality it moves up and down some inches at every inundation. It is misleading to say that there was any "proposal" to add another Sothic period to the history; it always was recognised by the Egyptians, and the only proposal is that of Berlin to cut it out, and shorten the history. Whether right or wrong in that scheme, at least the source of the difference should be fairly stated. The translator has hardly followed the subject, or there would not be "trenches" for divisions of a period (p. 46), or stoneware (p. 50), or enamel (p. 60), or brick arches upholding masonry (p. 91). More references to English publications might be given, "Royal Tombs" and "Prehistoric Egypt" are not in the extensive bibliography. The plates unfortunately have no link with the text, either by position, or reference on the plates or in the text; these matters need proper editing to make the work intelligible as a whole. With some revision of such detail, and of other minor errata, the manner would correspond with the excellent matter here laid before the public.

The Glory of the Pharaohs.—By ARTHUR WEIGALL. 1923. 8vo. 286 pp., 16 pls. (Butterworth.) 15s.

This is an interesting and amusing series of sketches, or essays, out of the author's full experiences in Egypt; but the title must surely be due to the publisher, as there is little about Pharaohs, and nothing about their glory. In the first paper the right note is struck about the necessity of knowing the country, if one is to understand the past or the present of the people. Mr. Weigall's indignation has been stirred by the removal of antiquities from Egypt; but it is the injury to things which remain there which is reprehensible. Whatever stays in Egypt waits to be destroyed, by the dealer, or the engineer, or the stonemason, or the lime burner, or the fanatic, or the small boy with a big stone. The heart-rending thing is to see the destruction going on, and know that it will always go on, Egyptians

being Egyptians. When anything can be removed to safety without damage, it had better be at the North Pole or the Equator than be left in Egypt. There is a reference to the "immediate purchase" of the letters from Tell Amarna; would that it had been immediate, for they were ground about in a sack on donkey back, and waited for months to find a purchaser. It is not personal greed that wishes to see things removed. Rather should every portable valuable go to Arizona than be left in a country where no native cares for it except to sell, and where it may be exposed any year to a fanatical mob which will delight in destroying an image and would be urged to do so by its leaders.

An essay on the preservation of antiquities is occupied with the analogy between Futurists and Prussians; the real enemies to preservation are utter ignorance which has no interests, and mad fanaticism. Till those can be cured, at home and abroad, all antiquities have a short life when they are visible.

In the "Morality of Excavation," the constant destruction going on in Egypt is rightly pointed out as the only alternative to clearing out and removing things by trained hands. It is useless to sentimentalise over leaving the dead as they were laid, when to leave them is to ensure their destruction by their descendants. The conscientious course is to observe, record, and preserve everything that can be of importance. Even here there are plain limitations, or the world would not contain the books that would be written. The sieve needful is a full knowledge of what is known and published already, thus sifting out the new material that is wanted, from the much larger mass of repetitions of familiar things. For this reason, a beginner's notes are of little value; for, if complete, the new facts are lost in the common mass; if incomplete, it is generally the essential matter that is missed. It needs years of experience to know what to neglect, in order to give hours and days to the things that have never been seen before, and from which every scrap of knowledge must be extracted.

The Temperament of the Ancient Egyptians is well illustrated, and a true sketch of conditions of work is in the chapter on excavations. Two chapters are given to a permanently valuable record of the opening of the tombs of Tyi, Akhenaten, and Horemheb. The "Nubian Highway" and "The Alabaster Quarries" recount interesting exploration in the deserts. Some amusing native letters are quoted, showing the real working of the mind, as well as the pathetic attempts at writing English, which are much better than almost any Englishman's Arabic letters. Two gems are not given here: the plaguey hanger-on who tries to recommend himself by saying proudly, "My name is The Limit"; and the hydraulic ram which was put into Arabic by an engineer, and then re-translated as "A watery sheep." Such are enough to cure one of venturing on a foreign language; how innocent, and how impossible, are such attempts. Other chapters are also worth having; and we may thank the author for so truly dwelling on the value of the consciousness of the historic past as an ethical background for present action.

The Exodus in the Light of Archaeology.—By J. S. GRIFFITHS. 1923. Sm. 8vo, 79 pp. (Robert Scott.) 2s. 6d.

This is a well-packed book, written with insight and thought. The position regarding the historic details is reasonable, and after setting that out fully, the various other views are stated, and the reasons for and against them. It is as good and as impartial a statement of the historical position as could be found, and it deserves the widest circulation.



TYPES OF SCARABS BEFORE THE XIITH DYNASTY.

ANCIENT EGYPT.

TYPES OF EARLY SCARABS.

DURING the last few years several early cemeteries have been searched, and scarabs found in some of the graves. Owing to these scarabs not being as common as those of the XVIIIth dynasty, a belief had arisen that there were no scarabs before the XIIth dynasty, though even the advocates of that belief admitted that there were possible exceptions. So far, however, there has not been any general statement as to what were the types and appearance of the scarabs before the XIIth dynasty. To make them more familiar, then, we have grouped together the scarabs from Abydos (1), Qau marked Q, Sediment marked S, and Harageh marked H.

The kind of evidence as to the age of these scarabs is the essential matter. That from Abydos (No. 1) was placed between the arm and chest of a contracted burial, packed in a small box, buried within the square of graves of Zet. Contracted burials are unknown after the VIth, or perhaps the Vth, dynasty; that this was not accidentally contracted is seen by the small box-coffin used. Were it not for the scarab the burial would have been assumed to be coeval with all the other contracted burials of the Ist dynasty. It does not seem possible to place this later than the VIth dynasty in any case. The examples from Qau were with pottery of about the IXth dynasty and earlier, and without any of the objects so well known in the XIIth dynasty. Those from Sediment were with pottery of the IXth dynasty, in the hundreds of burials of that age which have no trace of the XIth or XIIth dynasty objects. Those from Harageh are likewise from burials whose whole character is of that same age. In these three sites we are dealing with extensive cemeteries of a uniform character, quite different from that of later times. Beside these there was a single grave with pottery of the IXth-Xth dynasty at Kafir Ammar, with a well-designed scroll scarab, and another (see *Heliopolis and Kafir Ammar*, XXVI, 2, 3, and XXVII, 1, 5, 19, 22, 24, 26, p. 32, tomb 509), but as this was a single isolated case there is less certainty about it. There are also the eight scarabs found at Ehnasya with burials earlier than the temple. That temple was destroyed, and rebuilt by the XIXth dynasty, so it could hardly be other than of the XIIth dynasty, of which many pieces of sculpture were re-used in the XIXth dynasty. The burials are almost certainly, therefore, before the XIIth dynasty; but as the evidence is indirect, these eight scarabs are not quoted here as types.

Regarding the types, the scarab upon 1 and 2 is of the same style and the form of head is identical. The Abydos example, 1, is the most degraded, and implies a considerable period of transition from a true form; yet this cannot be

put after the VIth dynasty. The lion and lizard, 3, and the men upon 4, are much like the figures upon the buttons, which are of the VIth–VIIIth dynasties.

The scrolls show what a variety was developed before the Middle Kingdom. There is the simple symmetric scroll on each side, 6, cut on a large calcite scarab, much worn. There is also the skew scrolls, 7, on a long beetle, with narrow pointed elytra. The two pairs of spirals 8–10 seem to have been admired, as they are found both at Sedment and at Qau; large scarabs of this type are also known. 11 and 12 are placed together as found in one tomb; the form of linked spirals in 11 is that on the scarab of Zedkara of the Vth dynasty, and as there is no question that this type is as early as the IXth or Xth dynasty, the king's name in the Vth can hardly be further disputed (P.S.C. 5.8.4). The large scarab 13 is cleanly cut in dark green jasper; it belonged to a burial of Haur.em-sekhti, which had an early form of cartonnage mask with separate beads painted on it; this burial was wrecked, and another put over it which cannot be as late as the XIIth dynasty. It is probable that this scarab belongs to the VIIIth or early IXth dynasty.

The group 14–17 were found together, and they link to two others found together, 18–19. This group of lotus is very usual on scarabs, but is rare at Kahun among the sealings of the XIIth dynasty; it is probable, therefore, that most of this type are early. 20–21 are ovoid backs, not scarabs; they will carry with them a good many more such patterns.

A very coarse style of degraded types is from 22 to 28, connected with the style of the geometrical figures of men. They evidently have a long history of degradation lying before this stage was reached. 25 is figured in side view to show the characteristic form of a high scarab raised up on the legs. This form is peculiar to the IXth dynasty scarabs at Qau.

29 is placed here as it has the two *neb* signs, which belong to the group 30–34. This idea of the double lordship over Upper and Lower Egypt was favoured in the IXth dynasty; but it is notable that the crown is always that of Lower Egypt. On 33 it looks like a degradation of the vulture and uraeus on the *neb* signs.

From these scarabs we now know the types and style of the IXth and Xth dynasties; from the Kahun sealings we know the work of the latter part of the XIIth dynasty; and from the Hyksos graves we know the later styles—so it should be possible now to classify scarabs according to period.

FLINDERS PETRIE.

TRACES OF A KA-BELIEF IN MODERN EGYPT AND OLD ARABIA.

PROF. C. G. SELIGMAN, in his paper on the survival in Modern Egypt of a *ka*-belief,¹ has collected a considerable number of examples from various informants, but my own researches among a good many Egyptians of the simpler kind, carried on in the first half of 1914, met with little result, although I questioned several old men whom I had previously found well stocked with folklore. It would seem that the belief is dying out, though so long as it is held by demon-expellers such as the one figuring later in this paper, it will survive, however faintly.

The cases found were two. An aged native of Heluan believed that a spirit—"sister" (*ukht*) follows men and women through their lives: she is quite distinct from the immortal soul (*ruh*); she goes with the person to the tomb, but what happened to her after that he did not know. She has generally no direct influence on a man's character or actions, but has one peculiar quality—that if he gives way to a violent temper she is evilly affected and gives power to local *ginns* to materialise and work mischief on the man.

The second account was obtained at Nezlet Batran, a village near the Gizeh Pyramids, famous for a sacred acacia-grove. There I heard of a wise-man, a seer, living in the village, whose chief business, as usually in Egypt, was to reveal hidden things; but he had won special fame as an exorciser of evil spirits. At his house I found people gathered from all parts of the country, even far in the south.

When pursuing his wizardry he was himself possessed of a guiding spirit, not always the same, sometimes male, sometimes female (*sheikh* or *sheikhet*), but he seems to have changed them seldom, a single one attending him for long periods. His voice changed as the spirit spoke through him; he practised a kind of ventriloquism. A visit to an Italian spiritualist, an itinerant professional, in Cairo, had caused him to adopt the hackneyed curtain and tambourine, to him a new and desirable fashion; previously, we learnt, he set up for professional use a kind of small canvas tabernacle² in the courtyard of his house, or, if visiting, his host's.

Among his recent deeds of exorcism was one of special interest, the subject being the *ka* (*ukht*). A young man became subject to the attacks of a hostile spirit, causing him to fall down and roll about, shrieking and tearing at his clothes. He was brought to the wise-man, who, on enquiring of the spirit about its nature, learnt that it was no ordinary demon, but the patient's spirit—"sister." She told the exorciser that the young man "walked about waving his long hanging sleeve and turning his head from side to side"—acts which denoted excessive vanity and so enraged her that she resolved, if he did not amend, to kill him. The wise-man undertook the cure, with such success that the patient became his faithful follower and a promising candidate for seerdom: his master also had begun his career after a series of fits.

The "sister," it was explained, was born with every man, and accompanied him, walking underground, in all his ways, even to the tomb, but what befell her then was not known. As in all the cases reported, a clear distinction was

made between the *ukht* (or *qarin*) and the attendant spirits, good and bad, the "guardian" and the "tempter," who are also named *qarin*. To orthodox Muslims these are religious realities, attested by a *hadîth* (saying of the prophet Mohammed, handed down by tradition) and not to be confounded with the vague "sister"-spirit or any other.

The descriptions given above resemble, as far as they go, those related by Prof. Seligman, but my informants did not use the word *qarineh*, although its meaning, a "female companion" (fem. of *qarin*), makes it appropriate. *Ukht* is probably preferred, to prevent confusion with the demon *qarineh* known and feared in every Egyptian family, ever prowling to snatch away new-born children, sometimes leaving changelings in their place, the equivalent of the Babylonian *Labartu*³ or the later Jewish *Lilith*,⁴ and probably derived from the child-snatching demon feared by the ancient Egyptians.⁵

The ancient Egyptian idea of the *ka* underwent in the course of ages many developments and even sophistications, some of them early in history, but it probably kept among the illiterate subject classes, especially the peasants, its original simplicity as a protective genius, attached through life to man and welcoming him in the Elysian Fields.

The modern *ukht* has a different character; she is a guardian no longer in the old material sense, but morally, protecting her ward against his evil self, ready to go to the murderous lengths for a long time practised by saviours of souls in mediæval Europe. Yet, with all this, some of Prof. Seligman's reports show a kindly, reverent feeling towards the sprite—exhibited, for example, in the ejaculation of bystanders when a person stumbles: "God's name on thee and thy sister."

Between the *ka* and the *ukht* Islamic doctrine has intervened. In the Qorân the word *qarin* appears three times in the sense of "accompanying demon"—not "angel." The texts are:—

1. Ch. 41, v. 24.—"And we bound to them companions (*qarin*) and they painted [falsely] for them the present and the future."
2. Ch. 43, v. 35.—"Whosoever withdraws from the admonition of the Merciful, we chain a devil (*shaitân*) to him and he shall be his inseparable companion (*qarin*); they (the devils) shall turn them from the way, yet they (the men) shall imagine themselves to be rightly directed, until, when (the erring man) appears before us [at the Day of Judgment], he shall say [unto the devil] ' . . . oh, how wretched a companion art thou! '"
3. Ch. 50, v. 22.—This text refers to the Day of Judgment, when "the sentient worlds" (*alamîn*) are brought to trial (Qorân, ch. 31, v. 27), this term including spirit-beings, angels, ginn and demons, as well as the "sons of Adam."

"And his companion (*qarin*) shall say: 'Our Lord, I did not cause his excesses, but he was wandering afar.' "

The *qarin* is here shown as trying to throw the guilt of his own actions on the man to whom he is bound, but the Lord cuts short the wrangling and punishes both delinquents.⁶

Lastly, commentators⁷ on the above passages lay it down that the devil (*shaitân*) who is "made companion" (*maqroon*) of a man never leaves him.⁸

It is clear from these texts that the God of Islam, of his own volition, couples demons to men as part of his discipline. Orthodox Muslims are bound by these texts and the authoritative exegesis of them, yet the bonds have not proved strong enough, at least among the illiterates, to destroy older ideas of a favouring genius, though they have materially altered them, robbing the ancient spirit of his material protective quality.

II. ARABIA.

Thus far we have dealt with Egypt, and now turn to Early Arabia.

The root of the word *qarin* conveys the idea of "a pair" (one of its derivatives, for example, is *qarn*, "a horn"), and *qarin* is an adjectival form denoting the quality of being one of a pair.

That the prophet Mohammed should have attached to this word a deliberately invented idea of an accompanying spirit is very improbable. On the contrary, it is likely that he found such an idea already existing under the name of *qarin* and adapted it to the object of his mission—moral discipline—by making the *qarin* a devil (*shaitân*).

This inference is strengthened by another meaning of *qarin*, or *qarineh*, as well as the cognate *qarûna*, "immaterial self." This is not an early concept, the fruit of primitive imaginings, but belongs to a comparatively late period, that of philosophical reasoning. There must have been an earlier denotation of the term *qarin*, within the category of the immaterial—namely, an immaterial, or spiritual, "companion." It is likely, too, that the old companion-spirit was of a protective nature, and that when the prophet, in his *hadîth*, added a good *qarin* to the evil one announced in the Qorân, he simply reverted to an older tradition of a guardian spirit.

In one way the *ukht*, as described to me, corresponds closely to the indefinite personal "god" of the Babylonians—"My god who walks by my side."⁹ Dr. Langdon, in his contribution to Dr. Blackman's paper on "The Pharaoh's Placenta,"¹⁰ gives many incantation texts referring to this personal "god" and says: "The fundamental concept of personality in Sumerian and Babylonian religion is a sort of dualism, a person and a super-person. 'A man and his god' form a unity which under normal conditions always exists."

Thus the early Arabians found a *ka*-belief held on one side of them by their Semitic congeners, and on the other by their Egyptian neighbours; that they should share it, even if in a differing form, would be but natural.

One cannot, of course, claim more than that the existence of a kind of *ka*-belief among the early Arabs is suggested by their use of the word *qarin* and is in itself probable. It is possible, doubtless, that the Semitic conception of guardian-spirits is of independent origin, having no connection with the *ka*-belief of Ancient Egypt, and that the Arabian belief is merely a phase of the former. It is, further, possible that Semitic beliefs in the matter influenced those of Egypt before the rise of Islam, in the later periods of penetration; an example of this may be seen in the domains of magic, on comparing the Harris Hieratic Papyrus of the 20th Dynasty (edited by Chabas) with the Magic Demotic Papyrus of the third century A.D. (edited by Griffith and Thompson), so full of strange, un-Egyptian demons, exactly like those invoked by the modern ink-magicians of Egypt.

These and similar questions I have put aside ; my object has been to put on record things observed likely to be useful to students of such matters.

G. D. HORNBLOWER.

NOTES.

¹ *Essays and Studies presented to Wm. Ridgeway on his Sixtieth Birthday*, Cambridge University Press, 1913.

² The use of the special tabernacle is worthy of note ; it seems to point to a pre-Islamic time when some kinds of spirits would require an abode. We may compare the practice of a mediæval African people of the same race as the Early Egyptians, the Beja, who in the days of Makrizi were not yet converted to Islam and of whom he relates that each family had a priest (*cp.* the early Hebrews, Judges, xvii, 5 ff.) who set up a tent of skins in which he consulted " the spirit " (*v.* Prof. C. G. Seligman, *J.R. Anthr. Inst.*, Vol. XLIII, p. 661)

³ *v.* F. Thureau-Dangin, " Rituel et Amulettes contre Labartu," in the *Revue d'Assyriologie*, Vol. XVIII, No. IV, Paris, 1921, and R. Campbell Thompson, *Semitic Magic*, p. 41.

⁴ *v.* J. E. Hanauer, *Folklore of the Holy Land*, London, 1907, pp. 266 and 322 ff.

Some of the features reported to Prof. Seligman show, I think, traces of confusion, very natural, with a demon *qarina*.

⁵ *v.* Breasted, *Development of Religion and Thought in Ancient Egypt*, p. 291.

⁶ In sect. iv of Sale's *Preliminary Discourse* to his translation of the Koran he describes a popular belief of Muslims about the Judgment Day—derived from late Jewish—that the guilty, using all possible pleas for exculpation, will cast the blame of their evil deeds on anyone they can, and thus the " soul " and " body " will mutually attack each other but will both be condemned as were the blind man and the lame in the parable—also of Jewish origin—who, set to guard an orchard, combined to steal the fruit, the lame riding the blind.

⁷ The principal authorities consulted were *Tabari*, *Tag-ul-'Arûs*, *El Qamûs*, *Lissan-ul-'Arab*, *Mishkât-ul Masabîh*, and originals referred to by them.

⁸ Some commentators hold that the demon bound to a man is a *ginn*. Even in early Islamic times there is confusion between *shaitân*, *ginn* and *qarîn*.

⁹ Quoted by Prof. Elliot Smith in *The Evolution of the Dragon*, p. 214, from Dr. Langdon, " A Ritual Atonement for a Babylonian King," in the *Museum Journal*, *University of Pennsylvania*, Vol. VIII, No. 1.

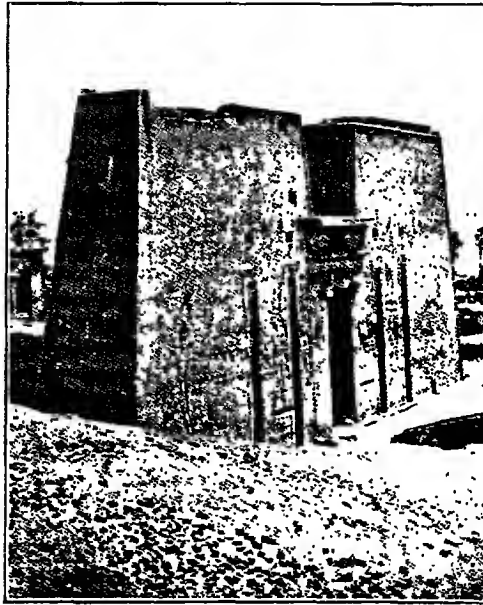
Sale, in his description of the Early Arabian divination by arrows (*Prel. Disc.*, sect. v, p. 90, of Tegg's undated 8vo edition), relates that the arrows kept in the temples were marked with the phrases " My Lord hath commanded me " or " forbidden me." This suggests a god for the person of the oracle-seeker, recalling Mesopotamian beliefs. (The Babylonians, as we learn from Ezek. 21²¹, used similar divinations.)

¹⁰ *Journal of Egyptian Archaeology*, Vol. III, part iv, p. 239.

THE SUPPORTS OF THE PYLON FLAGSTAVES.

THE device by which the gigantic wooden flagstaves, always placed before the pylons, were held secure, has, I believe, never been satisfactorily explained, though several contemporary sculptures and paintings of these flagstaves have come down to us.

In Luxor Temple we have a contemporary sculpture of the pylon of Ramesses II, and in the procession of Tutankhamûn, in the same temple, there are two views of the pylon of Amenophis III, which was then the front pylon of Karnak Temple. In Karnak Temple King Herihor gives a sculpture of a pylon with eight flagstaves, probably representing that of the Khonsu Temple, before his successor Paynozem remade it on apparently a smaller scale. Tombs 16 and 19 at Qurneh both have paintings of pylons dated to about Ramesses II and Sety I respectively, though I am not at all sure as to which pylons they are intended to



PYLON OF EDFU, WITH GROOVES FOR FLAGSTAVES.
TWO HOLES ABOVE EACH HELD THE SUPPORTS.

be. The flagstaves, some of which must have weighed over 5 tons, were formerly believed to have been of cypress or cedar ; Loret, however, in the *Annales du Service*, Vol. XVI, pp. 33-51, has brought a good deal of evidence to show that they were of Cilician Fir (*Abies Cilicica*), though, to my mind, he lays too much stress on the colour as given in the ancient paintings. In some cases, as Tutankhamûn's sculpture in Luxor and Herihor's at Karnak, the flagstaves are trees with the branches merely lopped off, and not smoothed in any way, whereas in Ramesses II's sculpture and in the presentation scene of Tuthmôsis III behind the sanctuary at Karnak the flagstaves are shown perfectly smooth.

Figs. 1 to 5 show the various indications which have come down to us from ancient times of the method by which the flagstaves were supported ; they are all reduced to the same scale. They are from the following sites :—

Fig. 1, Herihor's sculpture, probably of the previous pylon of the temple of Khonsu. (Karnak.)

Fig. 2, Tutankhamûn's sculpture of the pylon of Amenophis III at Karnak. (Luxor Temple.)

Fig. 3, Ramesses II's sculpture of his own pylon at Luxor. (Luxor Temple.)

Fig. 4, Unknown pylon from tomb of Amenmôse. (No. 19, El-Qurneh.)

Fig. 5, Unknown pylon from tomb of Pinehas. (No. 16, El-Qurneh.)

No. 16 is dated to Ramesses II, and No. 19 is probably of the time of Ramesses I—Sety I.

Before we can say that we have explained the curious form of the supports, we must not only account for every line in the most detailed picture known, but we must account for every fact observed in the pylons themselves ; further, we must show that it is a natural and simple method of attachment (for the Egyptian was, above all, practical, apart from his religion) or that it perpetuates some feature in the reed-and-mud buildings from which the pylons are derived. The latter possibility may be ruled out at once, as if such a reed building ever had flagstaves of proportional height to those associated with the pylons, they would not need upper supports at all, but would be simply fixed in the ground.

Let us examine the ports in the pylons in which the supports were held. We are struck with their great size—generally slightly over a yard square—and with the fact that in no pylon is there any trace of the ancient supports. The inference is that either the ports contained material which was of value to later generations, or that they contained something which has perished in the course of ages. In the unfinished pylon at Karnak the ports are empty, like all the others which we know to have been furnished with flagstaves. It may be added that the ports do not necessarily coincide with the interior chambers of the pylons, so that the supports cannot have been removed in order to obtain more light, as one might imagine from an examination of Edfû pylon.

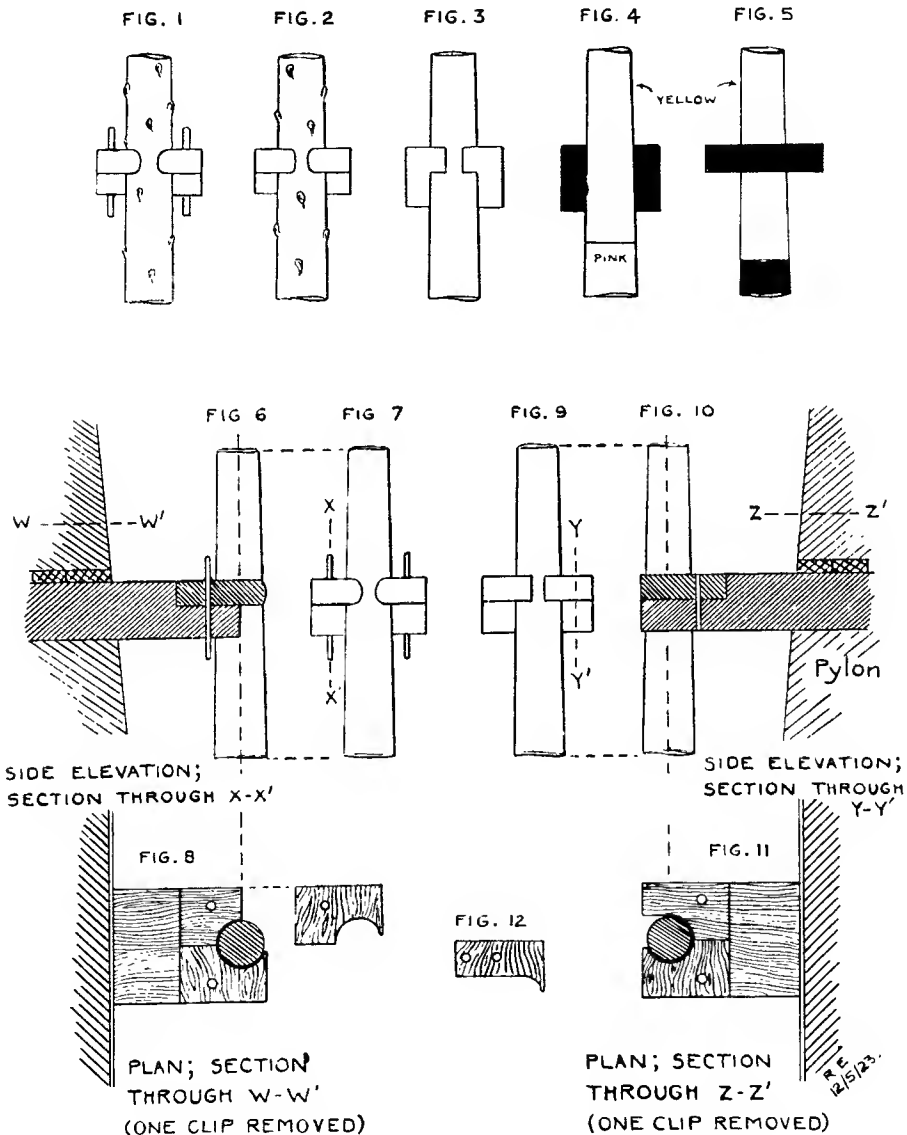
Let us consider the support shown in Fig. 1, as being the most detailed. Taking its outline only, it is seen that it, like most of the others, is just about the size of the ports in the pylons, and appears to be rectangular. This immediately suggests a cantilever of considerable size projecting from the port. The part of the support which holds back the flagstaff, which we will call the clip, is only of half the depth of the entire support. Taking the lower half, it is seen that the flagstaff is in no way hidden, strongly suggesting a semicircular groove in the end of the cantilever.

As to the material of the cantilever, apart from the clips, it seems almost certain that it was wood, since that would readily account for the fact of its disappearance from the ports in the pylon, having been either used as fuel or having rotted away. Had the cantilevers been of stone, which is perfectly feasible mechanically, we should expect to see them, at any rate in the rough, in the unfinished pylon of Karnak ; it would involve an unnecessary expenditure of labour, and be a difficult matter to haul a block, weighing at least three tons, up the face of the pylon after the constructional ramps had been removed.

Whether the cantilever was of one piece or not, matters little, so long as each piece was of full depth. In the Luxor pylon the cantilevers would only have

to project about 6 feet, and in the upper supports of the Edfu Temple they might have had to project 10 feet, which is well within the powers of any wood of 2 feet depth.

As to the holding-back device, the most simple means nowadays would be to use a thick metal band round the cantilever and flagstaff, but it is obvious that this is not the method used by the Egyptians, as vertical pegs are about the one method by which such bands could *not* be attached (Fig. 1). The Egyptians



did not like using heavy masses of copper, unless it was in a place which made a good show, and where plating was out of the question. It seems that they did not like covering the entire flagstaff with the clips; possibly the idea was, in the earlier examples, to show clearly that such flagstaves were of one piece—a matter of pride in the case of flagstaves and obelisks. A straight fir of 30 to 50 yards high took a great deal of finding, besides being a most unmanageable thing to transport, and, in a two-support pylon, it would have been fairly simple

to make the holding-back clips conceal a joint. I admit this appears rather far-fetched, particularly as, at any rate in Ramesside times, they appear to have had the bad taste to plate the masts with electrum. The fact remains, however, that the clips do not conceal the wood completely. Fig. 5 shows supports which might be metal bands round the cantilever, but I place little reliance on this, as the whole painting is very carelessly done. In Figs. 4 and 5 the supports are coloured black, which is the normal colour of the parts of the flagstaff which are not painted or plated.

One of the most simple and natural methods of holding back the masts is by clips of wood resting on the cantilever, which is "halved" to receive them, the clips being pegged or skewered down. Figs. 6 to 8 show the details of a support of this description, which gives a front view exactly like that of Herihor's sculpture. Whether there were two skewers on each side of the masts cannot be determined, as only one would show from the front. If there were only one, the clip would have to have the form shown in Fig. 8; if, on the other hand, there were two, a more simple design, such as Fig. 12, would answer the purpose.

In Figs. 6 to 8 it is seen that the recess in the end of the cantilever is a semi-circle, and that the clips project in front of it, thus making the line between the clips and cantilever show clearly, especially if there is a top light. If the ends of the cantilever are brought out as far as the ends of the clips, the division line will hardly show at all (Figs. 9 to 11), especially if the supports are metal-plated, giving a front view like that of the pylon of Ramesses II at Luxor.

In ancient records the flagstaves are nearly always described as being either wrought with electrum or copper or having electrum tops. An examination of the paintings of these flagstaves in tombs 16 and 19 at El-Qurneh shows them to have been parti-coloured. In tomb 19 they are painted in alternate bands of pink and yellow, and in tomb 16 in bands of black and yellow. The tops are in all cases yellow. To our minds, this indiscriminate plating or painting is most unpleasing, and one might well doubt if the Egyptians could have been guilty of it. It seems, however, that we must accept the artists' version, at least in this matter, as the general aspect of the pylons and flagstaves must have been familiar to every one, though the details of the flagstaff supports may well have been unnoticed. In the case of the tombs of El-Qurneh the artist was working some distance away from a pylon, while in the temple sculptures he was close to it and could thus render the details faithfully.

The colouring of the flagstaves was not done only if they were smooth; one of those shown in tomb 16 clearly shows that the branches had only been lopped off, yet it is painted like the others. In the sculptures no trace of paint remains except in Herihor's at Karnak, where the supports, and possibly the masts, are green. The reason for this colour is not clear to me.

In tomb 16 one of the pylons has no streamers on the masts; can it be that they were only so decorated during festivals?

R. ENGELBACH.

PITHOM AND RAAMSES.

IN a series of articles contributed by him to the *Journal of Egyptian Archaeology* for 1918 (Vol. V) under the title of "The Delta Residence of the Ramessides," Dr. Alan H. Gardiner brings together a vast quantity of learned and valuable observation which has an intimate bearing on an interesting period of Hebrew history. His own standpoint in the matter is indicated on p. 261: "So far as the Biblical city of Raamses-Rameses is concerned, the plan of this essay has been less to solve the problem than to provide the material for its solution. An estimate of the historical value of the Exodus narrative obviously lies outside the province of the Egyptologist; nor, indeed, can our quest be so extended as to include an exhaustive revision of the geography of the Exodus-route in the light of the Egyptian sources. Nevertheless, the conclusions here reached do seem to provide a basis for further deductions. These will be suggested in a tentative way, and it will remain for Biblical students to reject or to confirm them." Biblical students can best show their gratitude for Dr. Gardiner's work by discussing and using it freely, and it is with a view to this that the following remarks are offered.

We begin by considering his views as to the position of Pithom. Since Professor Naville's excavations at Maskhûteh this has been generally recognised as the site of the Biblical Pithom, the Greek and Latin Hero, Ero, Erocastra or Heroonpolis. On this Dr. Gardiner writes: "Now it cannot be denied that the evidence for the identification of Pithom-Heroonpolis with Maskhûteh provided by Prof. Naville's excavations there is very formidable, seeing that they yielded not only hieroglyphic inscriptions mentioning Pithom, but also Latin inscriptions mentioning Ero" (p. 268). He, however, argues against this, and tries to show that the true site of Pithom is Tell-er-Retabeh, $8\frac{1}{2}$ miles to the west. His main reliance is on a milestone found at Maskhûteh bearing the inscription "Ab Ero in Clusma M VIII." This he interprets as meaning "Nine miles on the road from Ero to Clysmā" (Suez). Mommsen, however, was of opinion that this milestone was no longer in its original position.¹ The point has been definitely decided by the excavation of Retabeh, as Mr. J. S. Griffiths has pointed out in his recent book on the Exodus.² "The work of the first winter has shown that, so far from being a Roman camp, this is the oldest site known East of Bubastis and that it has not had any Roman occupation," writes Prof. Petrie.³ It follows that it cannot possibly be Erocastra, and the milestone is therefore not *in situ*. This leaves Naville's identification of Pithom with Maskhûteh in a stronger position than ever.

It is, however, not merely in the case of Pithom that Dr. Gardiner's work sheds light on the biblical narrative. Other and greater gains result from our knowledge of the biblical Raamses. In order that full use may be made of his work it is necessary to test it by another method. He has collected all the occurrences of the name Pi-Ra'messe, house of Ramesses, the well-known Delta residence of the Ramessides, and other names that resemble it. Assuming rather

¹ "Repertus videlicet non suo loco, sed postea ad castrum ædificandum adhibitus," *Corpus Inscriptionum Latinarum*, Vol. III, Suppl. I, p. 1,214.

² *The Exodus in the Light of Archaeology*, p. 79.

³ *Hyksos and Israelite Cities*, p. 28.

than proving that there was only one royal residence in the Eastern Delta, he has then drawn certain inferences from the materials he has collected. It is proposed to check these by examining first whether there was only one such residence. Dr. Gardiner states his case thus: "Either Raamses-Rameses of the Bible is the Residence-city of the Ramessides near Pelusium, or else it is a town unknown to the Egyptian monuments, the existence of which is merely postulated" (p. 261). It will be submitted that the Egyptian monuments know of another town.

From the texts cited by Dr. Gardiner it appears that Pi-Ra'messe was described as being "*betwixt Zahi and Egypt*" and as "*the forefront of every land, the end of Egypt.*" That Pi-Ra'messe was a seaport, whether actually beside the sea or some little distance inland beside the river-mouth, is shown by the words "*the harbourage of thy ships' troops*"; "*its ships fare forth and return to port*" (p. 252). With this in mind let the following document (Papyrus Anastasi V) of the reign of Menepthah's successor, Sety II, be considered. Dr. Gardiner's translation is quoted as being the most recent known to me:—

"I was despatched from the Courts of the Royal Palace on the ninth day of the third month of summer, at eventide, in quest of those two servants. I reached the enclosure-wall of Theku (*i.e.*, Tell el-Maskhûteh in the Wâdy Tûmilât) on the tenth day of the third month of summer, where they told me that they had said in the South¹ that they (the slaves) had passed on the tenth (*sic* ?) day of the third month of summer. And [when I] reached the fortress (*scil.* of Theku), they told me that the groom (?) had come from the desert [to say] that they had passed the north wall of the Migdol of Sety-Menepthah-(is) beloved-like-Seth."²

Dr. Gardiner places this Migdol at Tell el-Her near Pelusium. That he is in error appears clearly from a glance at the map. The idea that fugitive slaves went from Pelusium to Maskhûteh, some 43 miles to the south-west, on the way to Tell el-Her, some 6 or 7 miles away from their starting-point, is obviously impossible,³ as also the view that the groom coming from the neighbouring desert could have reported what had happened at this distance.

While a portion of the document is obscure, certain inferences can be drawn from the parts of it that are clear:—(1) There was a royal palace situate at the distance of only one stage from Maskhûteh, for the narrator arrived at the latter on the morrow of leaving the palace. (2) Persons seeking to go from that palace to a point beyond the Egyptian frontier would pass through or near Maskhûteh in, at any rate, some cases. There is no possibility of equating this palace with Pi-Ra'messe, having regard to the relative positions of the sea and Maskhûteh and the impossibility of calling the situation of the palace the end of Egypt.

It is thus certain that there were at least two royal residences in the Eastern Delta.⁴

¹ Dr. Gardiner points out in a footnote that the meaning is not clear.

² *Jl. of Eg. Arch.*, Vol. VI, 1920, p. 109.

³ Presumably the *Migdol* of Sety Menepthah is identical with the fortress of Menepthah of Pap Anastasi VI: "we have finished causing the Beduin tribes of Edom to pass the fortress of Menepthah belonging to Theku towards the pools of Pithom [of] Menepthah belonging to Theku, in order to feed themselves and to feed their flocks" (p. 268), and the Migdol of Ex. xiv, 2.

⁴ Professor Petrie suggests the following further point. Seeing how Rameses II put his name on monuments, it seems probable that he called many cities after himself, like the Roman cities from London to Cilicia called *Augusta*.

Retabeh lies at the exact spot that would best suit this document. It was a store city of Rameses II. One inscription has been found there referring to a palace. Prof. Petrie writes as follows :—

“ To the left are two pieces, which must be from the pylon gateway, being on so much larger a scale than the temple front. They bear part of the titles of Atmu, ‘ lord of Succoth,’ and of the king ‘ Ramessu, living eternally.’ Next is a column of inscription, ‘ Adorations to thy *ka*. . . .’ Then comes a piece of a door-jamb from a tomb, which was re-used for stone in the town.” It reads, according to Mr. Griffith, “ Chief archer, keeper of the foreigners of Syria in Succoth, *keeper of the Residency in Succoth*, USER·MAAT·NEKHTU.” Ta·nuter here probably refers to Syria, as in some other cases, and not to its principal meaning of Arabia. That there were foreigners here is important, as showing that this was a city of foreign settlement.¹

There can be no doubt whatever of the exact correspondence of these Egyptological facts, so far as they go, with the data of Ex. xii, 37, and Nu. xxxiii, 3–6, according to which the Children of Israel journeyed from Rameses and pitched in Succoth.

So far, then, the Egyptian and Hebrew evidence makes it clear that there was a royal residence in or near Theku which cannot be identified with Pi-Ra'messe. What light does this throw on the collection of passages which Dr. Gardiner refers to the latter? In most of his citations there can be no doubt what place is meant, but in some of them the balance of probability seems to be against Pi-Ra'messe. His No. 34 (p. 197) is a clear instance of this: “ The letter preserved in *Pap. Anastasi VIII* goes a step further, writing the name of the city with the *prenomen* of Rameses II and without the preceding qualification ‘ House-of ’ (l. 44). The writer makes allusion to a ship ‘ *which is going to the town of Usimarē-setpenrē with the s'rt-wool (?)*,’ but there is nothing to indicate where the town was situated. What makes it difficult to recognise the Delta residence in this place-name is the fact that ‘ *House-of-Rameses-Beloved-of-Amūn*,’ i.e., Pi-Ra'messe normally written, is mentioned in l. 27 in the sentence ‘ *I will spend from the second month of inundation, day 8 to day 10, there (i.e., in Memphis), and then we will set forth to Pi-Ra'messe, if we live.*’ ” Once we know that there was another royal residence in the Delta which seems to have been known in Hebrew as Raamses without the Pi, the probability arises that the town to which the wool was going should not be identified with Pi-Ra'messe. The same comment applies to his (35), “ Yet another reference to Pi-Ra'messe may be contained in *Anastasi VIII* in the sentence ‘ *As to the s'rt-wool (?) of the god which is in Tomb (?) of Rameses-Beloved-of-Amūn on the bank of ‘ The-Waters-of-the-Sun,’ as whose freight shall it be given?*’ The word *hr* elsewhere means ‘ tomb ’; but the tomb of Rameses II was at Thebes, and not on the arm of the Nile known as ‘ The-Waters-of-the-Sun.’ Some mistake or unusual word may here be concealed, and ‘ Tomb (?) of-Rameses ’ may possibly be a variant name of the Delta capital. This is the more likely since the ship bound for ‘ *the town of Usimarē-setpenrē*’ carried the same commodity (s'rt-wool) as is here apparently mentioned as stored in ‘ *Tomb (?) of-Rameses.*’ ” Again he only succeeds in identifying his (36) with Pi-Ra'messe by forcing.

HAROLD M. WIENER.

¹ Petrie, *op. cit.*, p. 71 (my italics).

CURRENT FALLACIES ABOUT HISTORY.

THE fanciful resemblance of clouds to other objects, on which Hamlet plays, the visions of angels with drawn swords in the sky, or the bloody spears and lances of the red aurora, are the popular forms of that habit of fallacy which clings still to those who have not the knowledge and growth of discrimination to keep it in check.

The simplest and lowest form of this primitive frame of mind is seeing faces in the fire, or shapes of animals and men in natural stones. The face is the most familiar object of close examination, hence it is the type to which anything unexplained is compared. The first dynasty Egyptian collected baboon-like flints and placed them in his temple ; they are the link between the fetish stone of the savage and the art of the sculptor. In recent years several men have collected flints which suggest human or animal forms ; they may also have been so regarded anciently, but only the proof of artificial trimming could certify that belief.

One of the commonest causes of these fallacies is insufficient experience, which does not give enough ground for comparison. For long ages, Jewish history was the only glimpse of pre-classical times. There was no wider experience, and hence everything in the dark was brought into the Jewish illumination. Since then, Egypt became the familiar boundary of thought, and many writers—some even now—try to explain everything by Egyptian comparisons. Then an ample chance of fallacy came to hand in the Atlantis myth, and anything would be attributed to a supposed civilisation of which nothing was known. Because Hebrew was the only Oriental script familiar in England, we had the Sinaitic inscriptions read by it, and the “one primæval language” fallacy not a century ago.

Akin to this is the fallacy of fluent declamation. By the time an assertion, whether in advertisements or popular books, has been repeated confidently, and often enough, it becomes a popular axiom. “In a thousand and one details of our common civilisation the originality of Ancient Egypt is revealed.” It would be difficult to prove a hundredth of this assertion. “Egypt has been displaying the full story of the coming of copper, complete in every detail and circumstance, written in a simple and convincing fashion that he who runs may read.” Yet the story is probably elsewhere in a land of copper ores. Or we read of “Egyptians who died abroad when exploiting foreign sources of wealth,” while there is no evidence that any Egyptian exploited wealth abroad, or died in such an adventure. A common source of fallacy is a lack of familiarity with details, and a lack of training of the eye in discrimination. Almost anyone going abroad at first regards all foreigners as alike. It is only when the variety of character is learned that it is possible to see the differences, beneath the broad dissimilarity of the people from what is already known. In the same way a

literary friend, who is not artistic, remarked on the similarity of Mexican and Egyptian figures as indicating some connection. To my eyes there is no similarity, the Egyptian is so familiar that the Mexican appears different at every point. We see books quoting American buildings as evidence of Egyptian origin, where there is no real resemblance. It is commonly said that early races drew animals perfectly, but could not draw men. We know the men better than we know the animals, but a cow's opinion might be opposite to ours as to the perfection of animal drawing. A lack of seeing details is the base of the claim that the Egyptians originated the calendar; but we inherit the Babylonian calendar and Zodiac, with which the Egyptian constellations have hardly anything in common. The mere fact of a calendar of months is common to most races.

There is often the fallacy of noting a resemblance in a part and then claiming that it refers to the whole; like Fluellen's "M" in Monmouth and Macedon. This lies at the base of sympathetic magic; colour your arrows red and they will spill blood; eat yellow food and you will get jaundice; or wear a *Dentalium* shell for easy teething. So we read also of fallacies of resemblance; because the Egyptians had ships we are assured that they originated ship-building; yet other people's ships were entirely different from those of Egypt, and obviously arose from different ideas. Because metal tools cut we read, therefore, they gave the Egyptians "mastery over the hardest materials"; but granite was worked by stone hammers and emery, and no copper chisel would be of the least use upon it. Copper is said to have been valued as resembling gold; yet copper is found in use for practical purposes long before any gold is found in Egypt. We are told that green malachite "was compared to the green Nile which made the land of Egypt green and fertile." But there never was a green Nile, which is persistently brown. The *uaz ur* is the green Mediterranean Sea, which certainly does not produce fertility. Another writer describes Egyptian furniture as being made of bamboo, which is totally unknown there; much like an artist putting cactus hedges and maize from America into pictures of ancient Palestine.

There is another fallacy about resemblance, which dominates anthropology seriously. A particular appearance of skull, often only a vague impression about it, is taken as evidence of the diffusion of a race all over the world. Now the sane view of modern students is that skull form is dominated by conditions of life, quality of food and stress of grinding, even by the need of sucking the mares as the nourishment of the grassland nomads. Wherever similar conditions prevail, a similarity of form will therefore tend to arise. The conditions of any country usually remain similar, and hence the country subdues the invaders to its own type, as now Americans and Australians are being subdued. The mutability of the skull form is seen by the very exclusive Jewish race being assimilated to the type of each country where it is found. No doubt anthropologists resent this fact, as depriving them of a cherished criterion; but no one has ever proved racial continuity of the type of skull for centuries in different conditions, and there are strong instances to the contrary.

A similar fallacy is the notion that all races were maintained pure until the beginning of history, and we read protests against supposing that there was any serious invasion of Egypt in prehistoric ages. This view is ludicrous when we look at written history. See the whirlwind of races driving about the world. Goths from Scania, round by the Black Sea, across Europe, through Spain, and settling in Africa. Arabs swamping North Africa, up through Spain, and barely checked at Poitiers from swamping Europe. As far back as we can see, these changes

have always been going on ; and the less of settled civilisation there is, the more readily will such flux of races take place. Egypt has had a large immigration every five hundred years during known history, and we cannot credit less movement in wilder ages before that. The similarity of type in different ages is due to the climate and country, as history proves to us ; it has nothing to do with purity of race.

Another kind of fallacy arises from not regarding the possibilities of a case, owing to antecedent causes. We have been assured that agriculture arose in Egypt ; yet the names of corn came from Mesopotamia, and the corn is wild in North Syria and Asia. It must have been cultivated first in its native sources before it would be introduced into Egypt. Again, linen is said to be first woven in Egypt. But the flax plant is native in cold countries, flourishing now most in Russia, as formerly among the Scythians, who cannot have cultivated it, being nomads ; it is exotic in Egypt, and the use of it must have been discovered elsewhere before it would be introduced there. Then, copper is claimed to have been first wrought in Egypt. Now the earliest copper there is a pin used to fasten the sheepskin of the very earliest prehistoric folk, and it seems likely that it was brought in with the pottery peculiar to their culture from Algeria. There is no period known of using malachite before the use of copper, and copper would doubtless be first wrought where the ore was discovered, and not in Egypt. We even read that megaliths were erected by men searching for gold and pearls ; yet they are mostly found here far remote from either gold or pearls, and the ludicrous explanation has been given that the gold of the Wiltshire streams had been exhausted. Not a grain of gold could ever be found in a chalk stream. We are told that carpentry began in Egypt, a country so destitute of suitable wood that it always had to be imported ; such would be the last country to start using material which it had not got. The rise of carpentry is natural in a forest land, and among people who developed tools more readily than the Egyptians.

Another antecedent cause is the natural order of development as seen in other countries. We have been told that the use of irrigation led to the recognition of " the powers of the king who conferred this elixir of life upon the community " ; " and out of pondering upon these new revelations there emerged . . . primitive religion and magic." Thus it is said that the order is (1) irrigation, (2) kingship, and (3) religion and magic. The obvious order of social development is just the contrary of what is stated ; tribes have magic without kingship (Australia), and kingship without irrigation or cultivation (Scythia). Another instance of reversing the obvious order is stating that it is certain " that Elam and Sumer derived their culture from Egypt." On the contrary, there is much that is Sumerian in early Egypt, but nothing that is Egyptian in Sumer. The Arak knife-handle shows unmistakably an Elamite source of myths for people invading Egypt ; and also an art far in advance of anything that the Egyptian was doing at the time when he made the rippled flint blade of that knife. The priority of civilisation in Elam and Sumer is assured. All of these matters are examples of disregarding the antecedent causes.

Another fallacy that is often seen is the assumption that if a view is possible its truth is proved, without seeking if other views are equally possible, or more so. It is possible that Queen Tyi was of Egyptian parentage ; it is possible that some Roman municipalities survived in Britain ; it is possible that Mary Queen of Scots did not conspire against her husband or Elizabeth. But none of these possibilities prove that there is not a greater probability against such views.

A favourite mode of argument—especially with Biblical critics—is to assume the truth of one proposition, and then proceed to demonstrate something else that rests upon the first assumption. We have been assured that there were no good scarabs before the XIth dynasty, without any proofs; and that therefore all earlier kings' scarabs were not contemporary work. The first proposition has now been swept away by discoveries, and so the deduction from it vanishes.

Similarly a difficulty in some view is often taken as evidence that it cannot be true. The only real argument lies in the absence of any better explanation. There are difficulties, no doubt, in every system of Egyptian chronology that has been adopted; but the question is, where is the least difficulty? A view may be reckoned as having only 40 *per cent.* probability, but if nothing else can be credited with over 20 *per cent.*, the 40 *per cent.* view must hold the field. In historical work, without the possibility of experiment, and usually with imperfect material, we have to take results on the ground of relative probability, without usually reaching the certainties of an experimental science.

It is often assumed, notwithstanding the defects of our information, that no other source for a thing is possible than that known to us. Jade was assumed to be solely Asiatic till it was found in Switzerland. All sources of material are only probabilities, and some fresh source may come to light; such reasoning on probabilities may be worth something, but it is not conclusive.

Another fallacy to be avoided is the forming of theories about unknown periods which will not work when applied to known periods. An elaborate theory about the derivation of the years of dynasties in the Hyksos age was supposed to prove that they were fictitious. But just the same reasoning could with better grounds be applied to the well-known period of the XXIIInd-XXVIIth dynasties, where the duplication of one from another is nevertheless impossible. Theories should be applied to known cases, whenever they can be, before using them to deal with the unknown.

A flagrant instance of this fallacy is the assumption that changes in art are proportionate to time, hence that a similarity in style shows a nearness of period. Apply this to known history. The works of the Roman age in its decline in the third century are so closely copied in the sixteenth century that it is even a dispute as to which age some sculptures belonged. Anyone a few thousand years hence, where the less substantial mediæval work has largely disappeared, will be ready to believe that there was but a century between the decline and the renaissance, between the burghers commemorated by Roman tombstones on the Moselle and those figured by Dürer. This is not only due to copying, it is national taste, which survives all that is thrust upon it. An argument which is bankrupted by historic facts cannot guide us anywhere in the unknown. The truth is, that style is only changed by the dominant influence of a much higher art, and even that is sooner or later thrown off when the intruders are subdued by the country. All such intrusive changes are very rapid, and then fade imperceptibly. Hence the variations in style may be fifty times quicker at one time than at another, and they have no relation to the period elapsed.

The reliance on similarity of names has prevailed from the earliest times. The Egyptian was always trusting to a parallel word or name as proof of connection. This abuse of philology was usual down to recent times; but one clear case serves to warn us off the shoals. The similarity of name and of status of Minos of Crete, Mena of Egypt, and Manu of India was held to prove that they were all forms of our wide-spread myth, which therefore underlay all those

cultures. Now that the period of Mena has been found to be solid history, with much civilisation before it, the mythical theory vanishes ; for Manu is certainly a more recent personage than the rise of Knossian civilisation.

A curious perversion in the literary criticism is the habit of reading into a passage something of which there is no trace. It is a mental failure probably due to strong prepossession. Thus, a recent writer has stated that the Israelites believed that they adopted circumcision in Egypt ; the winged disc is said to have been placed on the high-priest's dress ; the altar built on the threshing floor is said to be a sacred stone ; the brazen serpent is said to have been effective in the rout of Amalek. Now all of these connections are entirely figments of modern prepossession, and have no trace of reality in the source. Similar material prepossessions are seen when we are told that "so-called steatopygous dolls . . . were not intended to portray racial characters, nor were they representations of . . . steatopygy. They are simply models of the cowrie-shell . . . anthropomorphized as the Great Mother." Yet they are as entirely human as could be made, without the smallest trace of the form of a shell ; it would be nearer the mark to call them representations of King Charles's head. It is said that the Egyptians "taught the Syrians the value of metal weapons." As the Syrians were far ahead of the Egyptians in the forms and design of their weapons, which have no resemblance to those of Egypt, the teaching, if any, was in the other direction. It is also said that "it is now known that the disturbed condition in which many Proto-Egyptian graves were found is evidence . . . of the handiwork of the prehistoric grave-robber." Yet no attempt is made to show how the un-fleshing of the body, reversal of bones, and severance of the head, found within the complete bandages in undisturbed burials, could be due to robbers ; while the recorded Egyptian traditions of such treatment, and the modern African customs, can leave no possible doubt on the matter. We must always be on guard against accepting statements from writers who show this habit of assertion regardless of facts, owing to mental prepossession. For this reason we should also avoid trusting for our facts to second or third hand sources. "A" may declare that "B" has proved something needed for "A's" argument ; but "A" must quote the facts, not "B's" authority, for the result. Unless the basic facts are clearly set out, we have to trust to the judgment of other writers, while we are entirely in the dark as to their logic or their prepossessions. Opinions should never be quoted, except as an interpretation of stated facts, or as showing a change in a writer's position.

We must also beware of applying any principle more widely than it can be proved. We can prove descent of some items of culture from one land to another ; that does not prove that all culture was so transmitted to all lands. We can prove independent invention, as for instance the jewelled tubular drill and the facing plate in the IVth dynasty, entirely forgotten and unknown when re-invented in the last century by engineers. But that does not prove that there never was transmission. As a general principle it is safest to draw the line between these opposite positions, by taking purely artistic treatment, when it cannot arise from utility, as a proof of connection, that is, of connection by transmission, or by unconscious revival of national taste, such as the late Celtic ornament under Louis XV. Where utility leads to a process or a device or a form, there it is as likely to arise from independent invention as from transmission.

Lastly, we may note the fallacies of numerical coincidences. This is a special jungle haunted by cranks. In the more obscure regions of it they disregard

the meaning of the numbers. "The circuit of the Chapter House internally appears to be 192 feet ; and 192·84, beside being the diameter of the sphere of the Zodiac, taking the sun's distance at 10, is the numerical value of the name Mariam " (*The Canon*, 236). Here are the number of English feet, the arbitrary distance of a celestial sphere on an arbitrary basis, and the plunge into the Kabbala, all placed in relation together. Not only was the alphabetic order of the Syrian alphabet taken as a number system (started about 1,000 B.C.), but the number values of each letter of a word were added together as a total number of the word. Then, by a higher flight, that total number could be decomposed into other numbers and letters, and so one word was proved equal to another. Although we may resolutely bar such aberrations, yet in reasonable study we must beware of many traps. Recently there was a dispute whether proportions of the pyramid of Khufu were based on the area of the face being equal to that of the height squared, or some of the many properties which were really identical with this ; all of these being statements of the same form, the only question is which of them has analogy to any other coincidence elsewhere. The only safe test for the reality of intentional connections is their being part of a system. Thus the proportion of a radius to a circle, in the height and circuit of Khufu's pyramid, is supported by a similar proportion in the King's chamber and in the sarcophagus ; and this being practically laid out as 7 : 44 is proved by Khufu's pyramid being 7 and 44 times a unit of 40 cubits, and Snefru's pyramid 7 and 44 times a unit of 25 cubits, for height and circuit.

Beside such coincidences there is a large field of geometrical hypotheses about buildings ; theorists are fond of drawing triangles and rectangles all over a plan or section, but when one looks into the detail they seldom really coincide with the structure, and often seem purely arbitrary.

Our business in life is to learn our own ignorance ; to realise how many pitfalls there are, owing to the small extent our knowledge covers, and the many fallacies to which our reasoning is liable.

As two important questions have been touched on here, it may be well to conclude by stating them clearly apart. The priority of Sumer and Elam in civilization before Egypt is shown by the continuous history of those countries. Reckoning this backward, the result is that the IIIrd dynasty of Kish is equivalent to the Ist dynasty of Egypt (see *Cambridge Ancient History*, on the short chronology, or both may be earlier on the long chronology). In detail, the cylinder seals appear in the period next before Urnina, between the IIIrd and IVth dynasty of Kish ; and these are equated with the cylinder seals of eastern style at the beginning of the Ist dynasty in Egypt, when copper became common. When we reach this period, "we are in the same realistic and decadent state of art (in Sumer) as in Elam . . . The Sumerian civilization has its roots in the remote age of a glorious art, and we first meet this people in a decadent stage." (C.A.H. 376.) Here Sumer had, then, a great civilization in the past, before the first dynasty of Egypt. With this agrees the magnificent knife handle from Gebel Arak, showing the highest art linked with Mesopotamian motives and Elamite climate, yet dated by the rippled flint blade into the second prehistoric age of low art in Egypt. There can be no question, by the continuous history and by the contemporary art, that Sumer was a whole age ahead of Egyptian development.

The other important matter to observe is the extreme independence of the culture of each country. A few imported objects might pass from one land to

another, invaluable as evidence of trade and date, but with little or no influence. In Crete the imports had no trace of effect on the sculpture, architecture or painting. In Syria, although it was a parade ground of Egypt for centuries, there is no trace of Egyptian influence, except in things made by Egyptians. In Babylonia no trace of Egyptian influence has been found. In the reverse direction, the Sumerian invaders of the Ist dynasty brought cylinder seals and other things with them, which were sooner or later all thrown off by the Egyptians, in spite of a mixture of race. Syria had developed the most perfect forms of tools by the period of the XIIth dynasty, yet the Egyptian went on refusing to use a haft to his axe or hammer, or to strengthen his tools by ribbing, until Egypt was swamped by Greece. The "Oriental Mirage" has died away in the study of European archaeology, and it is generally recognised that each land had an independent style and development of its own, and threw off extraneous borrowings sooner or later. There is no high road, by some universal source or synthesis, in history, any more than in language or in art.

FLINDERS PETRIE.

REVIEWS.

Die Literatur der Aegypter.—By ADOLF ERMAN. Leipzig. 1923.

This book has been written in order to give the general reader a knowledge of the literature of ancient Egypt. It is difficult for anyone, except those who are actually studying the subject, to know where to obtain translations, which are usually published only in learned tomes or in specialist journals. Here, however, Prof. Erman has gathered together specimens of the principal literary texts from the Old Kingdom to the Late Period. The religious hymns comprise extracts from the Pyramid Texts and hymns to various deities, including Akhenaten's hymn. Then there are stories, instructions, love-songs, folk-songs and triumph-songs. All these are translated flowingly and make a distinct addition to the literature of any country. As the translations are by one of the great masters of ancient Egyptian, they can be relied upon absolutely. It is to be hoped that the volume may be translated into English, that the general reader in England may also enjoy the literature of ancient Egypt. M. A. M.

The Coptic Theotokia.—By DE LACY O'LEARY, D.D. (Luzac & Co.) 1923. Price 10s. 6d.

Dr. O'Leary has published the hymns to the Virgin known as Theotokia. He points out, however that the Theotokia being always sung the word is now practically used to mean a choir-book, but it really corresponds with the Parvum Officium B.V. Mariæ of the Latin Church. In his careful introduction Dr. O'Leary gives details of the use of the Theotokia in monasteries and in non-monastic churches, and discusses the traditions as to the authorship of the hymns. The Theotokia for each day of the week are then given; the codex used is the Vatican Cod. Copt. XXXVIII, and to every day there are appendices of **epuena** and other additional matter. In this way the book is invaluable for Coptic and liturgical scholars. Dr. O'Leary has very wisely not attempted to simplify (?) his originals by altering the spelling and dividing the words, but has copied the originals exactly with the mis-spellings where they occur. For students who wish to work on MS. this is the only method; the German system of dividing up the words and correcting orthographical errors is required only by beginners.

M. A. M.

Egypt and the Old Testament.—By T. ERIC PEET. 8vo. 236 pp. 5s. (University Press of Liverpool.) 1922.

It is to be regretted that the valuable constructive work which the author wrote on Italy, fourteen years ago, has been succeeded by a devotion to the barren field of destructive criticism. This obsession of the Biblical critics depends on verbal questions rather than matters of fact, and is too often accompanied by

facile misstatement. To give some ground for telescoping Egyptian dynasties, while not a word is said about the proofs that they were successive, we are told that the Babylonian IInd dynasty ruled "in the Country of the Sea, and may therefore for chronological purposes be eliminated from the king-lists" (p. 45); yet on p. 52 it is said that it partly overlapped the Ist dynasty, while in reality it was the sole dynasty for nearly half the time, yet it is to be "eliminated." Why this should overrule the regular system of Egypt is not evident. On p. 98 the marriage of Joseph into the family of a priest of Ra is "a later colouring," because "All that we know of the Hyksos occupation of Egypt . . . makes such an admission very difficult." What we do know is that Apepa II favoured the Egyptian worship by making columns and gates of copper, to adorn the temple at Bubastis. Priests were then by no means out of fashion. It is said that the Biblical narrative states that Pharaoh was drowned; no such statement appears in the narrative.

The main subject is that of the Exodus, and in this theories (of Dr. Gardiner) regardless of the physical facts are accepted as an authority. The Roman station of Heroon is agreed to have been Pithom, in the Wady Tumilat; and there is no Roman station in that Wady except Tell el-Maskhuta, where the stone of Ero Castra was found. It is absurd to seek to place it at Tell Retabeh, where there is no trace of Roman occupation. At Tell Retabeh is a large granite stele of Rameses, stating that he "built in the cities upon which is his name," and this would be pointless if his name was not on this city, where he did build extensively. It is impossible, therefore, to assert that "there is probably no city called after Rameses in this district" and "not a particle of evidence" for such a name here. The city of Raamses is proposed to be placed, along with Avaris, at Pelusium. Yet Avaris is stated by Josephus to have been upon the Bubastite channel, which implies that it was south of Bubastis, and certainly not at the Pelusiatic mouth. Also the only monument known from Avaris was found re-used in Cairo, implying that the city was within reach of Cairo stone-hunters. The indications agree to its having been at the great Hyksos camp of Tell el-Yehudiyeh. No such camp is known at Pelusium.

The Exodus route is, then, proposed to start from Pelusium and go to Kadesh, beginning in the middle of the narrative of Numbers and entirely neglecting Exodus. But really there is no contradiction as to the route; in Num. i, Israel is in the wilderness, again in Num. ix, in the second year of the Exodus. In Num. x they left Sinai and came to the wilderness of Paran, where was Kadesh (Num. xiii). It is quite a gratuitous disregard of the narrative to begin in the middle of it, and there is no incongruity between Exodus and Numbers. An attempt is made by the J. E. P. process (generally discredited by the much earlier versions) to assert that the J narrative records a direct march from Egypt to Kadesh. It must be by some marvellous internal consciousness that this is evolved; for in every one of these stages between Egypt and Kadesh Yalveh is named, both in the Heb. and LXX, as also in the detailed route described in Exodus. It is an insult to a consistent narrative to state that "the Israelites leave Egypt and march direct across to Kadesh." Moreover, such a march would be impossible for a large company, as it is many days across a waterless desert.

In the later history many pages are spent inconclusively over the possibility of Solomon's queen being a daughter of Shishak. Fortunately, we can settle this by relative dates only. The war with Rehoboam was just before the

XXIst year of Shishak, as the stone for his triumph scene was then being quarried. If XXth of Shishak = Vth of Rehoboam, Ist of Shishak = XXVth of Solomon. But Solomon was married before the temple was finished in his XIth year (I.K. 3, 1), and therefore 14 years before the end of the 35 years' reign of Pasebkhanu. It is impossible, therefore, that "Pharaoh's daughter" could be other than that of Pasebkhanu, being married about the middle of his long reign.

In many other cases gratuitous difficulties are raised for which there is no ground. The site of the temple of Onias is disputed; but if the 180 stadia were taken according to the Greek measure of that very variable unit, the site would fall on Heliopolis, and Josephus could not have failed to describe it as being at a place which he knew well. There is therefore no ground for not accepting the Egyptian stadium, which thus places the site of Onias at Tell el-Yehudiyeh. The celebration of the Passover there is disputed, as being abstractly unlikely; but the facts are that the Jews celebrate the Passover wherever they are, in Egypt or any other country; and the ovens found, and the leg-bones in them, exactly agree to the Passover ceremony.

There does not seem to be a single case of the results which are disputed in this book being discredited; on the contrary, the statements made here are sometimes seriously in error.

Catalogue of Textiles from Egypt. Vol. III.—By A. F. KENDRICK. 8vo, 107 pp., 32 pls. 5s. (*Victoria and Albert Museum.*)

This is a welcome completion of the Catalogue from South Kensington, dealing with what are considered distinctively Coptic textiles. The illustrations are excellent, on blocks with a very fine grain (250) which permits of magnifying the details. The remarkable feature is the entire absence of the cross, and the prevalence of the Oriental motives. This suggests the influence of the Persian rule in Egypt, 616-626 A.D.; and the hunting scenes, horsemen, pairs of birds and trees, may well be placed after this Eastern penetration. One explanation might be modified; No. 780 seems to represent the Annunciation and the visit of Mary to Elizabeth. It is well that Mr. Gaselee is to discuss the Coptic inscriptions, as they are scarcely noticed here.

The Edwin Smith Papyrus.—By J. H. BREASTED. 8vo, 45 pp. (*Recueil . . . à la Mémoire de Jean-François Champollion.*)

In this Paper Professor Breasted enters on the details of the first ownership of the Papyrus Ebers by Edwin Smith, and describes another medical papyrus now known by his name, which belongs to the New York Historical Society. This papyrus is 15 feet long and 13 inches high. The signs are compared with dated examples, and it is concluded that it is of the XVIIth dynasty or earlier. The subject is medical, like the Ebers Papyrus; the system is to state the title, examination, diagnosis, verdict and treatment. The method of the work is strictly medical, without resort to magic, and it shows a regular order, beginning at the top of the head and proceeding downward.

The Prophets of Israel.—By HAROLD M. WIENER. Sm. 8vo. 196 pp. (Robt. Scott.) 1923.

This is a vigorous and careful study of the prophetic writings, with the view to the direct fulfilment of the prophecies in the centuries between the exile and the Roman Age. The canon that all "prophetic" description must be after the

event is justly disregarded here, as it is disproved by the printed prophecies of Savonarola, which were closely fulfilled thirty years after his death (Blass, *Philology of the Gospels*, 41). Various explanations may be given, but real prediction is a fact. The treatment of the documents is with a reasonable view of the uncertain elements in the matter, of misunderstandings, corruptions of text and other difficulties. The separate detail cannot be dealt with here, but we may note that the early spread of the Jews in different countries is stated, as in Damascus (I.K. xx, 34), and the various lands of Isa. xi, 11. This agrees with the Jewish settlement far up in Egypt under Manasseh. The perversity of modern critics in making difficulties where there is a perfectly plain course is well exposed, on pp. 77, 127. All through the work the contemporary Assyrian and Babylonian records are fully quoted in comparison with the prophecies. This book should be carefully read by anyone concerned with later Jewish history or the prophetic writings.

The Aswan Obelisk. By R. ENGELBACH. 4to, 57 pp., 8 pls. 1922. (*Service des Antiquités.*)

This work records a careful study of the unfinished obelisk lying in the quarry at Aswan, and of the questions involved in the transport and erection of obelisks. The obelisk was encumbered with blocks fallen from above, and much clearance was needed to expose it. The length is 137 feet, much larger than any erected obelisk; the base is 13 feet 9 inches, and the estimated weight 1,168 tons. Such was the intended monument, which would have eclipsed all others; but flaws in the granite were found, and these needed testing, by cutting away the face to see if the flaw ran deep. Step by step the grandiose plan had to be reduced, and the several outlines drawn on the top surface show how the scheme was whittled down to less than half the weight, 105 feet long and 10 feet 4 inches wide. Allowing for the finishing of the sides, this would have been closely equal to the Lateran obelisk, if it had been completed.

The method of detaching such immense masses was not by wedges or chiselling, but by pounding away the granite to form a great trench along the whole length, and so isolate the block from the main rock. For the working down of a flat surface before starting the excavation, burning was largely used, to weaken the granite so that it could be crushed with less difficulty. This would explain the crumbly masses of crystals, which are not reduced to powder, found on the sites where blocks have been dressed, as at Lahun.

Wedging was used on lesser masses, from the IVth dynasty onward, as may be seen on the roof blocks of Menkaura. Whether wooden wedges wetted were used or metal wedges with side plates ("feathers") is left an open question. The absence of any trace of copper stain on the sides of the wedge holes favours the idea of wooden wedges, which were swelled by wetting. The "black granite hammer" with handles (Cairo), which is here suggested for driving wedges, is like a basalt block with handles (Univ. Coll.), which is supposed to have been a weight.

The mode of pounding out the trench in the granite produced a series of scoop hollows along the side and hollows in the floor. Large balls of dolerite abound in the quarry working, and were evidently used as hammer-stones. They vary between 8 and 13 inches diameter, weighing from 9 to 15 (? 40) pounds. The wear is not spread all over, but on a few parts of the balls, which points to their being fixed on the ends of rammers. This would probably be managed by

having a hide strap, with a hole rather less in size than the ball. There were four pounding spaces to each worker, taken in rotation ; this would allow for a boy squatting below to sweep out the dust from the work on to the next space. It is estimated from present experiments that the trench would require seven months of work. Each working area, of four spaces, has a register marked in red above it, showing what depth had been removed ; these marks average 2·7 inches apart ; as the rate of work is estimated at ·8 inch per day over the whole working area, the register would be marked up every three or four days. As the lines of register are in groups of 10 marks, this suggests marking every three days, and starting a fresh line each month.

The removal of the obelisk from the bed is a more difficult task. The use of wetted wedges along the base would be risky, for if the strain were greater at one end than at the other the mass would break across rather than rend the whole length. The author prefers the notion of hand pounding ; yet this would be a gigantic work, far more difficult than cutting the side trenches : (1) because the blow would be sideways, and not assisted by gravity as when vertical ; (2) because there would not be width enough to work readily ; (3) because soon the work would be far in under the mass, and difficult to reach, as it would be over 6 feet inward from each side. Perhaps the most practical way would be to side-cut a groove about a foot square and pack this with baulks of timber wedged in tight. Then, by wetting, the force of swelling such a mass along the whole length might suffice to split off the obelisk. Unfortunately the beds of other masses have been dressed away for further work ; if a bed could be found left intact, the question might be solved. Lifting the obelisk out of its hollow is another problem ; the use of levering seems to require an impossible number of men ; the method of ramming in sand is slow but certain, and should be considered. It is said that two natives in last century raised a sarcophagus from a deep pit in a few months by ramming sand.

The difficulties in erecting obelisks have never been fully accounted for. Not only has the weight to be raised, as a colossus can be, by dragging up a long embankment, but the main trouble is in handling such a mass when nearly upright. The obelisk of Hatsheput has jumped a foot out of place, and flawed off one corner by pressure. The improved proposal of the author is that a brick box was built up to half the height of the obelisk and filled with sand ; the obelisk was dragged up until the butt rested on the sand, which was then extracted through a passage below, thus gradually lowering the butt and bringing the obelisk nearly upright, when it could be finally pulled into place by cables. This seems quite feasible, and works well in model ; it agrees with the Egyptian methods of banking up brick staging in building a pylon, and filling up a hall with earth as the walls rose, so as to have a wide working platform. There is nothing easier and safer in Egypt than massive earthwork and brickwork. Placing and removing such materials cost nothing, as the people could do it during the inundation, when everyone was idle. This book will always remain a standard one on the subject of obelisks.

"And in the tomb were found."—By TERENCE GRAY. 8vo, 236 pp., 11 pls. 1923. (*Heffer.*)

Mr. Gray continues to work in the vein which he opened by his previous book. It is a difficult style for a writer to follow, as our age differs from all others in its conciseness and lack of form ; the speeches and sermons of even a century or

two ago seem to us insufferably lengthy. Hence the Oriental prolixity of the Egyptian can scarcely be made palatable in modern shape. The incidents of the four scenes of different periods that are here constructed are all true to the country and conditions, and are very deftly woven together; that of Khufu seems the most successful of them. In the "Graph of Egyptian History" the form of the curves of change are too symmetric; really the rise is always very rapid, and the descent gradual, as in the curves in *Revolutions of Civilisation*, p. 85, of which the author does not seem to be aware. The highest point of the XIIth dynasty was under Senusert I, not II; also Piankhy was quite as high in work as Psamtek.

The Oldest Letters in the World.—By Mrs. SYDNEY BRISTOWE. 8vo, 96 pp., 1923 5s. (*Allen and Unwin.*)

This is another sketch of the Amarna letters, which are by no means as old as those of the XIIth dynasty. The authoress deals very freely with the historic materials, ascribing to "the Egyptian priests" "the fabulous story of Queen Hatshepsut"; "Hatshepsut's coronation is taken verbatim from the account of Amenhetep III's coronation." "My perhaps startling theory is that the Ramesside kings were only priestly inventions . . . and that the name Rameses was only a copy of that of the city Rameses." The bodies of Yuya and Tuyu "are those of Amenhotep [III] and Queen Teia." We also read of "exquisite wreaths found in Hyksos tombs in Egypt." When further the Khabiri are said to be certainly Hebrews (though named centuries before Abram), and all Conder's renderings are preferred, our readers will hardly care to enter on such a mass of misunderstandings.

Revue Biblique, Oct., 1922.


LEFEBVRE, G.—The parallels are set out between the biblical expressions and the passages in the tomb of Petosiris, which have been noted in *Anc. Eg.*, 1922, pp. 83, 85, 87. It is suggested that editors of biblical books may have known Egyptian writings in the Persian period. The evidence that Jews were probably in Egypt as early as Taharqa points to Egyptians having been open to knowing Jewish writings before the rigidity of the religion after the Captivity.


PERIODICALS.









Zeitschrift für Aegyptische Sprache, Vol. LVII, Pt. I, 1923.

(Continued from ANCIENT EGYPT, p. 30.)

MISCELLANEOUS.

BISSING, FR. W. VON.—*Die angebliche älteste Darstellung der "Lebensbinde."* Jéquier's conclusion (*P.S.B.A.*, 1917, p. 87) that this symbol goes back to remote archaic times is based on an unreliable publication. The essentials in his essay in *Bull. de l'Inst. Français* (1914) are to be found in an earlier publication by von Bissing on ancient Egyptian knot amulets, as is also the proof that the  sign occurs in Ist dynasty texts. [See Den, in *R.T.*, II, xix, 149.]

SETHE, K.—*Der Lautwert von* . The sound of this sign is $\frac{3}{4}h$ not i^3h . This is proved by a correct reading of Pyr. 480 *d* (W. 590), and by several passages in Middle Kingdom mortuary texts.


Mśn·w "Harpunierer" (*A.Z.* 54, 50). A further proof of this reading is given by *L.D.*, II, 149 *g*, "... ..      ," "overseer of the harpooners on the water-courses," also by seal impressions in *R.T.*, II, vii, 5, 6. One of these scenes shows king Usaphais struggling with a hippopotamus; in this he is called . In the other scene, the king is harpooning the animal, and he is called "harpooner," the curious sign after the *s* obviously corresponding to the harpoon implement , with which the word is frequently written later.



Ein Missbrauch des Qualitativs im Koptischen.—The Coptic qualitative, which is derived from the Egyptian pseudoparticiple, should only be used in sentences which have the form of Praesens I or II (Stern, *Copt. Gr.*, § 349). Sethe quotes instances of its use with its own peculiar meaning of "to be in the state" with other tenses in place of the infinitive, **UNTQ-COTU** "*er kann nicht hören.*"—Sethe quotes four passages from the Pistis Sophia to illustrate this use of the expression "he cannot hear," literally "he has not hearing" (*i.e.*, "the possibility of hearing").

ꜥꜣꜥ.—Sethe combats Rösch's assertion that **ꜥꜣꜥ** is the Achmimic equivalent of the Sahidic **ⲉⲣⲁⲥ**, "when," and suggests the rendering "nevertheless."



Zu den Märtyrerakten des Apa Schnube (**ⲥⲏⲏⲓⲃⲉ**).—Sethe elucidates two obscure passages in this publication. (1) In the account of wounds inflicted on a virgin martyr, he (the Governor) "sent for **ⲏⲏⲏⲓⲃⲉ**, salt and boiling

vinegar, and they were mixed together and poured over her." *nnpe* is obviously "pepper." (2) The second passage mentions "Kameopolis which is Bubastis." Sethe recognises in this the name of a town compounded with *πόλις*, a Roman substitution for a native name, such as Kainopolis (Kene), "new town" near Koptos. He suggests that Kameopolis may represent Kainepolis.

DÉVAUD, E.—*OBZG* (*Sah.*). This word (Egyptian, *'ibh*, "tooth") has hitherto been classed as a plural masculine noun. It is really a feminine noun, of which the singular and plural are the same, and it belongs to the same category as *poune*, "year." Thus it cannot derive directly from , but must come from an ancient Egyptian word of the form *'ibh·t*, which may have been a popular parallel form of *'ibh*.

SPIEGELBERG, W.—*Die ägyptische Gottheit der "Gotteskraft."* The abstract idea of "power," "strength," expressed by the word *nht*, has long been known from demotic texts as a conception of divinity. The most important passages are in the Setne Romance (I, Kh.). A plural form *n·nht·w* is also known. Both forms are known in personal names; the singular is only recorded in one name, probably denoting "the (servant) of the divine power." The Greek transcriptions show that  is not to be read, but is a sort of determinative placed before the word *nht*. This word appears to denote an abstract divinity, and is one of the fourteen attributes (*k³·w*) of Ra. This abstract conception of "power" or "powers" is always regarded as a personal god, as is shown by the hieroglyphic rendering  of the demotic name. In several passages of the Setne Romance, the "divine power" is apparently a water-spirit. This connection with water occurs in the oldest mention, namely, in the "Tale of the Doomed Prince," in which *w·n nht* is the guardian of a crocodile. Hitherto this personage has been considered to be a giant, in spite of the determinative of a divinity, but Spiegelberg regards it as a river god. The god can thus be traced to the XIXth dynasty, to which period the name *Ns n³ nht·w* also belongs.

SPIEGELBERG, W.—*Das wahre Motiv des Zugunsten der Prinzessin Nes-Chons erlassenen Dekretes des Gottes Amon.* Amon was expected to provide a blessed Hereafter for the royal line of the XXIst dynasty. There is a deification decree for two members of this dynasty, Pi-notem and his wife Nesi-Chons. The decree for the wife pays particular attention to the earthly welfare of the widower; Amon undertakes therein that the dead wife shall bring good and not evil to him and his. The husband is doubtless responsible for the purport of the wife's decree. Having thereby assured for himself a long and happy life on earth and protection from the evil influence of his wife's spirit, he need only be concerned in his own decree for happiness in the life to come.

SETHE, K.—*Miszelle.*  für "und," "mit."  occurs for the preposition "with," "and" (presumably the old Egyptian *hn*), in an inscription of the time of Philippos Arrhidaios. Sethe points out several passages in which Daressy (*Ann. du Serv.*, 18, 19) missed this meaning.

Vol. LVIII, Pt. I, 1923.

SETHE, K.—*Die Sprüche für das Kennen der Seelen der Zeiligen Orte*. The first part of this paper was published in *Zeitschrift*, LVII (see *A.E.*, 1923, i). The current portion deals with Chap. 112, which forms one of the group of texts concerning Buto and Hieraconpolis. It is connected with Chap. 113 by a joint postscript, which has more bearing on Chap. 112 though it follows Chap. 113.

Chapter 112 is composed of four parts which had no connection originally :— (1) the question why Buto was given to Horus, and the answer that it was reparation for the injury to the eye ; (2) the reason for the impurity of the oryx antelope and of the pig (typhonic animals) and of the taboo on pork ; (3) the division of the children of Horus between Buto and Hieraconpolis ; and (4) an invocation of the gods of the Underworld, borrowed from the Pyramid Texts and added in the N.K.

The injury to the eye forms the connecting link between (1) and (2). Whilst his eye is still suffering from the wound inflicted by Set, Horus is told by Ra to look at a black stroke (presumably on a white ground). He “ sees it all white ” (*i.e.*, the bad eye does not see the stroke) “ and so arose the oryx antelope ” (*m*₃ *ḥd* = “ seen white ”), which was the animal emblem of the 16th U.E. nome. Horus is then told by Ra to look at a larger object, namely, a black pig. His eye “ rages,” being as it was at the first blow that Set gave him, Set having attacked him in the form of a black pig. And so arose the abhorrence of the pig for the sake of Horus. As is usual, cause and effect are confused, the choice of animal being the natural consequence of the fact that the pig was unclean. The first object on which Horus is told to look is written as a stroke : Sethe suggests that the remarkable writing of the word *km*, “ black ” in Pyr. 227*a*, 228*b* and 252*b* may be explained thus, and may supply the reading for the ideogram in this text.

The part dealing with the children of Horus begins abruptly with their names, and must be an interpolation from a tale in which they are mentioned. This text must have been comparatively late, as it conforms to the triad nature of the “ souls.” The “ children’s ” parentage is given ; their father is Horus the elder. The addition of the epithet must be to explain the anomaly that Isis is their mother, and Sethe considers that the whole distinction of an “ elder ” Horus rests elsewhere also on similar grounds, namely, to cloak contradictions in divine genealogies. It is clear from the text that the Horus who asks for the company of the “ children ” in Buto and Hieraconpolis is their father, and is the same Horus whose injured eye is the theme of the earlier parts of the text.

Precedence is given to Buto in several ways : the chapter on Buto precedes that on Hieraconpolis, and Horus names Buto first in his demand for two “ children ” in each town. Moreover, Imsty and Hapy, who are always named first, are assigned to Buto, whilst the jackal-headed god and the falcon-headed god are given to Hieraconpolis. The customary representations of the souls of Buto and of Hieraconpolis show them with falcon heads and jackal heads respectively, in conformity with the old conception of their identity with the “ worshippers of Horus,” so that the allocation must have been made at a time when their form and sequence were completely settled.






















SETHE, K.—*Die ägyptische Berechnung der Schwangendauerschaft*. Owing to the difference in calendar, the Greeks reckoned the period of pregnancy as ten months, the Egyptians as nine. Numerous examples from Greek and Roman literature are given by Fritzsche in his short *Exeg. Handb. zu den Apokryphen* 6, 138. The Coptic translation (ed. *Lagarde*) renders the words by **Ⲛⲓⲏⲧⲏⲥⲃⲟⲩ**, "ten months long"; in the London MS. published by Thompson, the original **ⲓⲏⲧ** has been erased and emended by **ⲧⲓⲥ**, "nine." The Egyptian reckoning occurs also in II Maccab. VII, 27, whereas IV Maccab. XVI, 7 gives it as ten months. [The Greeks obviously reckoned by moons, as do the modern Hindus, whereas the Egyptians reckoned by the calendar month.]

SPIEGELBERG, W.—*Bemerkungen zu den hieratischen Amphoreninschriften des Ramesseums*. The author gives the results he has obtained from the inscriptions published in "Hieratic Ostraca and Papyri" (Egyptian Research Account, extra vol., 1898), and adds some new material. A list is given of the geographical names found on wine jars, and also a list of names of head vintners. Spiegelberg is unable to decide the meaning of the words ^{~~~~~}⊙ followed by a numeral, which frequently come after the word "wine"; the circular sign is to be read ⊙, and means a day of the month. Maspero's translation, "wine for three days," cannot hold, as the amphoræ are the same size, and the number of days varies between three and twenty-five. Spiegelberg suggests "wine of the *x*th day," on the assumption that the amphoræ were docketed at the vineyard before despatch (*cf. sbt* = "transport" or the like on oil jars in Tell-El-Amarna, XXIII, 32, 33, 37, 38). From his survey of material from the Ramesseum, Spiegelberg explains the inscriptions as follows:—they denote vintages from vineyards in the Delta (mainly near Pelusium) which belonged to the Ramesseum. The date does not contain the king's name, but must refer to the reign of Rameses II; witness the high figures 57 and 58. After the date follows the name of the brand and of the vineyard, with the frequent comment that the vineyard belonged to the temple of Rameses II. At the end comes the name of the head vintner (*hry Kmy·w*).

ASSELBERG, HENRI.—*Ein merkwürdiges Relief Amenophis' IV im Louvre-Museum*. The fragment, which is here reproduced in photograph, was first published by Prisse (*Monuments*, pl. 10, 1). It measures 130 × 60 cm. It was found in the 10th pylon of the big temple at Karnak, and had formerly belonged to an Aten temple of Horemheb. King Amenhotep IV is shown at either side offering incense to the disc, of which only a small arc remains. Above him are his cartouches, and above these are fragments of other cartouches, presumably of the Aten. Behind each figure is a long vertical line; behind the line on the left side is the name of Queen Nefertiti. The carving is in sunk relief. Seventeen rays proceed from the disc: the outermost on each side offers the hieroglyphs of a million *hbsd* festivals to the King; the others hold the ☉ and ☿ signs alternately. The representations of the King are characteristic of the old style, and do not show the marked peculiarities of later portraits of Akhenaten. Nevertheless the mouth, nose and chin are quite different from those of Amenhotep III, and show that the figures represent Akhenaten himself and are not merely portraits of Amenhotep III with his son's name added.

SETHE, K.—*Zur Jahresrechnung des Neuen Reichs*. In the IVth and Vth dynasties, in the M.K. and in Ptolemaic times alike, the regnal years coincided with the calendar years. The last year of a king ran from his last New Year's day (1st Thoth, of old called 1st day of 1st month of Inundation) to the day of his death, and together with the first year of his successor made but one calendar year, so that the first and last years of a reign are only fractions of a true year. There seem to be some exceptions to this rule in the N.K., in which the regnal years are counted from the date of accession and not from the 1st of Thoth. According to Sethe, these exceptions cannot be explained away; he considers that a new custom arose after the Hyksos dominion and lasted at least until the end of the N.K.

SETHE, K.—*Zu den Sachmet-Statuen Amenophis' III*. In this article Sethe furnishes some corrections and amplifications to the lists published by Newberry and Gauthier of the Sekhmet statues erected by Amenhotep III in Thebes.




SETHE, K.—*Die hieroglyphe des Auges und das Wort ỉrr·t "Weintraube."* From the N.K. onwards the sign  occurs in the word ỉrr·t, "vine," "grapes" (  , etc.), and from the M.K. onwards it takes the place of *r* in the word irt·t, "milk" (  ). Loret concluded that the group  in the first word must read ỉrr, a view which is strengthened by the absence of *r* in the second word. He believed that he had settled the question of the reading of the old writings of the verb stem  "to do," where the forms in which gemination is to be expected are generally written , and would thus read ỉrr. Sethe cannot agree with Loret's conclusions, which do not explain the frequent N.K. variant   , nor a IIIrd dynasty form  . Sethe holds that the remarkable M.K. writing    clearly shows that the word is connected with the stem ỉrr, and has no etymological connection with the word , "eye," from which the eye sign in the word "to do" derived its sound *ir*. The substitution of the stem sign  ỉrr (ỉr) for *r* in the word ỉrr·t is inexplicable, but seems to have a parallel in the substitution of the two-consonant sign  *ir* in irt·t, "milk." Equally inexplicable is the vocalisation of the Coptic forms of the word ỉrr·t (ελϣοϣε, etc.), which show the existence of a vanished consonant between the two *l*'s.

SPIEGELBERG, W.—*Die Empörung des Hohenpriesters Amenhotpe unter Ramses IX*. An unpublished papyrus of Rameses IX in the British Museum mentions the rebellion of a high priest of Amon. It has been always tempting to identify this unknown rebel with the Amenhotep who is known to have lived under Rameses IX. This guess is confirmed by Spiegelberg's correction of a passage in Peet's translation of the Mayer A papyrus.

ALT, ALBRECHT.—*Zwei Vermutungen zur Geschichte des Sinuhe*. The words in which *Wd̐ Hr rs̐n·t* (*uza·hor·res·neit*), head physician and high priest of Neith of Sais, describes his official journey from Elam to Egypt in early Persian times, suggest to the writer of the article the influence of Sinuhe's description of his wanderings to Byblos. The word *ḫst* is used in both passages for the regions

traversed. It is obvious that at both periods the term must have been purely geographical, and could not apply to cultural conditions.




Though the term *ḥkꜣ* had a wide application in the M.K., Alt considers that the words *ḥkꜣ.w ḥs.wt* are used as the name of a tribe in B 97-99. This passage would thus contain the first mention of the Hyksos.




SPIEGELBERG, W.—*Gipsproben aus Tell el Amarna mit hieratischen Aufschriften*. Two small lumps of plaster (gypsum) about 45 mm. high are in all probability test pieces. Each has a round flat surface (68 mm. and 72 mm. diameter respectively) which bears an inscription in XVIIIth dynasty hieratic. The inscriptions give the day of the month without the year and the words “*Ḳd* (  ), from Akhetaten.” The words gypsum and *Ḳd* have probably the same etymology. *Ḳd* is probably a loan word from Akkad. *gašsu*, Latin gypsum. As the word is not known in Egypt before the N.K. and is spelt in “syllabic” writing, it is to be regarded as a Babylonian word.









Miscellaneous.

SETHE, K.—*Noch einmal zu den Worten n-nk tm am Anfang von Totb. 17*. Further examples are given of the meaning “to me belong” for *n-nk* and of “Lord of All” for *nb tm*.

SETHE, K.—*Ramses II als “erster Prophet des Amun.”* A relief from the great hypostyle of the temple of Karnak shows Rameses II acting as, and bearing the title of, “first prophet of Amun.” This scene presumably represents the great festival at Luxor which was held in the first year of the King’s reign, in which he took part in person. At that time the office of high priest was vacant (*Zeitschrift*, 44, 30 ff.).

SETHE, K.—*ⲙⲉⲩⲁⲕ “vielleicht” und die Zugehörigen Formen*. Erman derived *ⲙⲉⲩⲁⲕ*, the Coptic-sahidic expression for “perhaps,” from N.E.    “thou knowest not” (*Zeitschrift*, 32, 128). The phrase cannot properly be used to a woman, nor to more than one person. In the instances known to Sethe the addressee is nearly always masculine. He quotes an example of a corresponding feminine form *ⲙⲉⲩⲁⲓ* in the Sahidic version of the history of Saint Theodorus (*Munier, Ann. du Serv.*, 19, 228 ff.).

SPIEGELBERG, W.—*Die Etymologie von ʕwʕe, “Fehlgeburt.”* Spiegelberg brings forward evidence for the derivation of *ʕwʕe*, “miscarriage,” from   , *Why ḥ.t.*

SPIEGELBERG, W.—*Ein Priestertitel des Hathorkults*. A priest of Hathor is given the titles    and      on two fragments in the Strasburg collection, presumably from Deir-el-Bahari. Thus *ʕs* (“the elder”?) was a title of a priest of Hathor, who is here called the “golden.” These passages supply the translation of an inscription on a fragment figured in Naville’s XIth Dyn. Temple at Deir-el-Bahari, III, plate 9B: “. . . her *ʕs* priest, he being satisfied, I am an *ʕs* priest, I speak to the golden one (= Hathor).”

ANCIENT EGYPT.

THE BRANCH ON PREHISTORIC SHIPS.

IN ANCIENT EGYPT, Part I, 1914, page 33, Professor Petrie enumerates the reasons for interpreting the well-known paintings on prehistoric pottery as ships and not towns. In two of the figures accompanying the text, the boats (as they are without any reasonable doubt) have a single frond or a pair of palm fronds in the bow ; in one figure, a leafy branch (or bunch of small date-palm fronds or a dôm palm leaf) bends over a small cabin amidships.

Both these are referred to in the text, as probably shelters from the glare or heat of the sun ; but a single frond, or a pair of fronds, stuck high and upright in the bow of a boat would hardly afford a shelter worth resorting to, and another explanation perhaps fits it better.

Sir H. Johnston (*George Grenfell and the Congo*, II, p. 958), speaking of the boats of the primitive Bube people of Fernando Po, says : " On the extremity of the prow is fastened a kind of flagstaff, the top of which is decorated with a bunch of feathers. Bauman states that this can become the mast of a primitive sail." He continues : " It may resemble what the present writer has seen in the estuary of the Cameroons River, where the canoes are more or less propelled by a huge raphia frond being fastened like mast and sail in one, and serving the purposes of a sail." The figure accompanying is a rough copy of the author's sketch (reversed), and the resemblance to the Egyptian form is obvious.

E. S. THOMAS.



EARLY HITTITE RECORDS.

THE Egyptians and the Hittites were so intimately connected in the age of the New Empire that Hittite ancient history is no longer out of place in ANCIENT EGYPT. Indeed it is by no means improbable that future discovery will indicate earlier relations between the two peoples than the time of the XVIIIth and XIXth dynasties ; M. Montet's recent discoveries at Jebel show that as far back as the IVth dynasty the Egyptians had established themselves on the coast of Canaan, and had a colony in a port which was in maritime relation to the coast of Asia Minor, while we now know that the copper, lead and silver mines of the Taurus were worked by Babylonian firms as far back as the period of the IIIrd dynasty of Ur (B.C. 2400). It was from Cappadocia that Babylonia and Syria were at that time supplied with their bronze, and the geometric buttons which characterise the Syrian VIIth and VIIIth dynasties in Egypt point to Cilicia as their source.

To render the present position clear, it is well to state the following names of Hittite kings, which can now be put in historical order. The family descent is broken where a bar is placed.

Pamba, conquered by Naram-sin.

Biyustis, contemporary of Anittas.

Dudkhaliyas I, the Tidal of Gen. xiv, 9.

Labarnas, queen Tawannannas.

Khattusilis I.

Mursilis I, q. Kharabsilis ; conquered the dynasty of Khammurabi,
1926 B.C.

Bimbiras.

Khantilis, q. Waliannis.

Bisenis (or Kassenis).

Zidantas, q. Iyayas.

Ammunas.

Zurus (short reign).

Titias (short reign).

Khuzziyas, q. Summiris.

Telibinus, q. Istapariyas.

Mursilis II.

Dudkhaliyas II.

Khattusilis II.

Subbiluliumas (son), wrote to Akhenaten, 1383 B.C.

Arnuwandas I (son).

Mursilis III (brother).

Muwatallis, or Mutallis (son) ; war with Ramessu II, 1292 B.C.

Urki-Tessub (son).

Khattusilis III (uncle) ; treaty with Ramessu II, 1280 B.C.

Dudkhaliyas III (son).

Arnuwandas II (son).

Dudkhaliyas IV (son).

The Hittite cuneiform texts recently published by Dr. Forrer (*Die Boghazkoi—Texte im Umschrift: Geschichtliche Texte aus dem alten Chattireich*, II, 1; Leipzig, 1922) throw new and unexpected light upon the early history of Asia Minor. As no translations of them have yet appeared, readers of ANCIENT EGYPT will probably be interested in the following extracts. At present, indeed, nothing more than extracts can be attempted; the Hittite language is still in process of decipherment, and most of the texts are so mutilated that in many passages only a word here and there is intelligible.

The earliest texts are translations into Hittite of the campaigns of Sargon of Akkad and Naram-Sin (B.C. 2750) in Asia Minor. The Assyrian version of the campaign of Sargon, which was found by the German excavators in the house of the Hittite ambassador at Tel el-Amarna, was translated by myself in the *Proceedings of the Society of Biblical Archaeology*, December, 1915, and since then by Dr. Weidner in *Boghazkoi-Studien*, VI (1922). It had been written by a Hittite, not by a Babylonian, though doubtless a Babylonian original lay behind it. But some Hittite writer who was acquainted with Assyrian had extracted from this original the history of the campaign in Asia Minor and put it into "Hittite" Assyrian, which was not exactly the Assyrian of the Babylonian scribes.

The beginning of the Naram-Sin text is lost; then we have:—

"Then the temples of Ellil which are in the city (of Babylon?) [I restored]:

"And I at that time against all the enemy lands made war.

"Mana-ila king of the Western coast (?), Bunana-ila king of Pakki . . .

"Lapana-ila king of Ullini, . . . innipa-ila king of . . .

"Pamba king of the Hittites (Khatti), Khutuni king of Kanis, Nur-[Dagan king of Buruskhanda],

"Akwaruwas king of the Amorites, Tissenki king of Parasi . . .

"Madakina king of Armani, Izkibbu king of the Amanus mountains, Tess[inki king of . . .],

"Ur-Larag king of Larag, Ur-banda king of Nikki . . .

"Ilsunaïl king of Dur, Tisbinki king of Kursaura (Garsaura)."

"Altogether 17 kings who formed an alliance, I overthrew them."

"I entrusted the soldiery to a Kharrian and offered libations of sweet wine."

Kanis was the modern Kara Eyuk, 18 kilometres north-east of Kaisariyeh, which in the time of the IIrd dynasty of Ur became an Assyro-Babylonian settlement. Nur-Dagan had been the antagonist of Sargon, whose campaign in Asia Minor had been directed against his capital Buruskhanda or Barsukhanda, and from whence he had brought back vines, roses, figs and other trees to Babylonia. The name of the city occurs frequently in the cuneiform tablets of Kara Eyuk, postal and commercial intercourse between the two cities of Kanis (or Ganis) and Buruskhanda being frequent and active.

The Kharrians (or Murrians, as the name may also be read, perhaps with better reason) spoke the Mitannian language and were of the Mitannian race. They were of Asianic origin, but at an early period occupied the northern part of Mesopotamia, which they called Mitanna, "the land of Midas," after the name of their leader, as well as the later Assyria.

The alliance which was formed against Naram-Sin is interesting since it embraced Babylonian cities (Larak or Larancha, and Dur) as well as northern Syria and eastern Asia Minor, and so proves the intimate connection that existed

between all parts of Western Asia in the third millennium before our era (*cf.* Gen. xiv). Dur is the modern Salihyeh on the Euphrates, which the recent excavations of M. Cumont have shown was the *Eurôpos* of Greek geography.

A fragment of the second column of the tablet recounts the tribute received by Naram-Sin and includes "talents of silver," "talents of copper" and "lapis lazuli" which were brought to the city of Akkad.

On the reverse of the tablet is a paragraph referring to a war with some enemy whose name is lost but who was presumably of Asianic origin. It reads: "In the first campaign 190,000 soldiers I led; they defeated him. On the second occasion 120,000 soldiers I led; then they defeated him. The third time 60,000 soldiers I led; then they defeated him."

The fragment of another tablet (No. 5) relating to Naram-Sin mentions the Sa-gaz or Khabiri. They were the mercenaries who served as the body-guard of the king; inscriptions of Rim-Sin, the contemporary of Khammurabi, refer to them in Babylonia, and at Boghaz-Keui, where they were called Khâbiriyaš, there were 1,200 of them, 600 of them keeping guard on one side of the palace of "the god," *i.e.*, the king, and 600 on the other side (*Hittite Texts from the British Museum*, 32, 37). *Khabiri* in Assyrian meant "companions" or "auxiliaries," the word having been borrowed from "Amorite" or West Semitic, and it resembled the names under which the free lances of mediaeval Europe were known. Heber the Kenite may have been one of them, and I am inclined to think that they were the prototypes of the Greek Kabeiri. Their communal god was called Khabiru, "the Companion." In one inscription mention is made of 3,000 Khabiri. Along with the Khabiri, but apparently of less consequence, another body of mercenaries called Lulakhi is also enumerated. The Khabiri of the Tel el-Amarna tablets must have been Hittite bands.¹

The fall of the Amorite dynasty of Khammurabi, in Babylonia, was brought about by the invasion of the country by the Hittites about B.C. 1900, during the reign of its last king, Samsu-ditana. We now learn from the Boghaz Keui tablets that the Hittite leader was Mursilis I, the son of Khattusilis I. A later king, Telibinus (whose name signifies "Son of Telis"), gives us the following information on the subject (No. 23):—

"Thus (speaks) the Lord Telibinus the great king: Originally Labarnas was the great king; then his sons, his brothers and his priests, family and soldiers were mustered. But the territory was small. From hence he went to war and with his arms conquered the enemy's country.

"So he annexed territory and extended his dominions. He made them subject as far as the sea. Afterwards he returned from the campaign, but his sons and whoever wished went from hence to the (new) country.

"Now the lands they governed were those of the cities Khubisna (the Greek Kybistra), Tuwanuwa (Tyana), Nenassa (also written Ninassa), Landa, Zallara, Parsukhanda² and Lûsna; the great fortresses were entrusted (to them).

¹ Lydian tradition related that Akiamos, king of Lydia, campaigned in Syria, and that his general, Askalos, founded Ashkelon, where the Lydian Mopsos, or Moxos, flung the goddess "Derketo" (Istar) into the sacred lake. Already in the time of Rim-Sin, or Erinn-Aku, Ti'dal—the cuneiform Tudkhula and Tudkhaliyas, "Spear-holder"—king of "Nations" (the Babylonian Umman-Manda, or "Nations" of Asia Minor)—accompanied the army of Babylonia and Elam in its campaign against Southern Palestine (Gen. xiv).

² Miswritten Massukhanda. The Hittite scribes confound characters which closely resemble one another—*par* (or *bar*) and *mas*, *ma* and *ku*, *un*, *dub* and *ab*, *uk*, *ar* and *sum*, &c.

"Afterwards Khattusilis became king; then his sons, his brothers, his priests and his relatives and his soldiers were mustered; from hence he went to war and with his arms conquered the enemy's country. So he annexed territory and extended his dominions. He made them subject as far as the sea. When he returned from his campaign his sons and whoever wished went from hence to the (new) country and to their hands the chief fortresses were entrusted.

"When for the second time the slaves of the king's sons made sedition, they took possession (?) of their houses and . . . their masters; so they caused bloodshed.

"When Mursilis became king of Khattusas (Boghaz Keui) then his sons, his brothers, the priests and his relatives and his soldiers were mustered, and he invaded the land of the enemy in arms and extended his territory: he made them subject as far as the sea.

"He marched to Khalpa (Aleppo) and captured Khalpa. The abundant spoil of Khalpa he carried to Khattusas. After that he marched to Babylon; he captured Babylon and overthrew the Kharrians (of Mitanni); the abundant spoil of Babylon he gave to Khattusas. Now Khantilis was cupbearer; after this he took Kharabsilis, the wife of Mursilis, as a wife (after slaying Mursilis).

"And Zidantas was . . .; he took . . . the daughter of Khantilis as a wife. Now Zidantas plotted with Khantilis: evil words they [uttered] and they murdered Mursilis and shed blood.

"So Khantilis was supreme."

Here the tablet is broken, a few words only being decipherable: "soldiers," "he marched," "territory," "the cities of Khurpanas (Herpa) and Carchemish."

Then we read:—

"And when Khantilis descended upon the city of Tegarama (Togarmah) he spoke as follows: 'This have I done, since Zidanta . . .'"

Here again the tablet is broken and the paragraph ends with the words: "then the gods avenged the blood of Mursilis." It seems that they brought the Kharrians upon "the land of the Hittites."

"The queen of the city of Sukzia" next appears upon the scene. We are told that "she died," being murdered along with "his" (not "her") sons. This is followed by a paragraph of which the first half only of the lines remain:—

"When Khantilis the queen of Sukzia . . .

"afterwards he avenged; whoever murders . . .

"the chief of the palace officials delivered a message; then . . .

"they were mustered; they the city of Tegarama . . ."

The following paragraphs are intact:—

"And when Khantilis became old he retired as a god (*i.e.*, abdicated). Then Zidantas murdered Bisenis (or Kassenis), son of Khantilis, along with his sons; his principal servants he (also) slew.

"So Zidantas became king; then the gods avenged the blood of Bisenis; the gods made Ammunas his son his enemy and he murdered his father Zidantas.

"And Ammunas became king; then the gods avenged the blood of his father Zidantas by [denying] to his hand wheat, wine, oxen and sheep."

Here follows another break. Then we read:—

"The lands were hostile to him . . . the soldiers of Adania (Adana), Arzawa, Sallapa (perhaps identical with Zalpa), Barduwata and Akhkhula (probably the Greek Anchiale) came hither on a campaign, but the attempt had

no success, and when Ammunas became a god (*i.e.*, died) Zûrus, the captain of the bodyguard of spearmen in those days, who was his own son, delivered Takharwailis to the Gold-stick,¹ whereupon Titiyas killed the whole brood together with their children.

"And he delivered Tarukhsus to the . . -man ; then he murdered Khantilis with his sons. So Khuzziyas became king and Telibinus took Istapariyas as his first wife. Then Khuzziyas murdered the others and published the statement : ' Telibinus has made away with them ! '

"His 5 brothers, he has assigned houses to them ; let them go and inhabit them ; so let them eat and drink ; but none (of them) must do evil ; should I learn (that evil were done) for the evil they have done to me I will destroy them.'

"When I, Telibinus, had ascended the throne of my father, I made an expedition against the city of Khassuwas (' the royal city '), the city of Khassuwas I conquered. While my soldiers were at the city of Zizzilibbis, they wrought destruction on the city of Zizzilibbis.

"Later on I, the king, came to the city of Lawazzantiyas (Laviansênê ?) : Lakhkhas was my enemy ; he had sent instructions to (?) Lawazzantiyas ; the gods gave him (*or it* ?) into my hands, and first of all the head of the agricultural bureau (?) Tessub . . . , [the head of the . . .] Karruwas, the head of the . . . Inaras, the chief cupbearer Killas, [the . . .] Tessub-mimmas, the chief scribe Zinwaselis and Lillis [all] great men to Tanûis the scribe, the spearman, gave"

Telibinus now furnishes further details of his reign, and after a long break enumerates the cities over which he held rule. Fragments of two lists remain, one naming the cities north of south-eastern Cilicia, the other the cities of Syria. Among the first are included : Sukzias ; Asur-nas, " the city of Asur," which implies an Assyrian settlement ; Samukha, north of Boghaz Keui (occupied by the Kharrians) ; and the Mountain of the city Barsukhandas (or Buruskhanda), near the river Khulayas (the Pyramus, the modern Jihun which may preserve a reminiscence of the old name). Then follows a list of " the 34 cities " of Syria annexed by the Hittite king, of which only the last few names are left. These are : Kuwannas ; then three lost names ; Lakhkhurumas ; two lost names ; Kharakharas (the Assyrian Qarqar, Hebrew Aroer) ; Mallitaskurias ; one name lost ; Kharsuwas ; Tipilas ; Kursu . . . ; one lost name ; Suwanzuwannas ; Tamlutas ; Bikumias ; Dammaskhunas (Damascus) ; one name lost ; Khalip-passuwas (Aleppo) ; Kalasummiyas ; one lost name.

The mention of Damascus is important ; it is the earliest reference to the city yet found in the cuneiform inscriptions and shows that Hittite sovereignty extended as far south as the northern border of Palestine. There is no difficulty, therefore, in understanding how Hittite settlers could have found their way to Hebron in the time of Abraham.

We learn from an inscription of Mursilis II, the son of Telibinus (K.T.B.K. IV, No. 4), that Tegarama, or Togarmah, lay on the road between Carchemish and Harran. From the same inscription we also learn that Telibinus had made his son, to whom he had given the Semitic name Malik-Arakh (" a king is the Moon-god "), the vassal kinglet of Carchemish. Mursilis afterwards confirmed the son of the latter in the kingship of the city, and further made Rimi-malik, another son of Telibinus, kinglet of Aleppo.

¹ A high official who seems to have superintended the gendarmerie. His should probably be entitled " Gold-lance " rather than " Gold-stick."

Khantilis has left a fragmentary inscription (No. 20) in which we read :—

“ After Khattusilis the king his son Mursilis became king, and he was a premier king. When he had invaded the lands of the enemy he handed over all the lands to Khattusas, and so he enriched Khattusas.

“ Then he marched to Aleppo and afterwards avenged the blood of his father (who had apparently been killed there) when Khattusilis went to survey (lit. mark out) the kingdom of Aleppo. Mursilis made the country of Aleppo responsible and conquered all the lands of the Kharrians.

“ All its wealth he seized. This he carried to Khattusas. Then he marched to Babylon and captured the city of Babylon.”

Here the tablet is broken. The next intelligible fragment is :—

“ Now the fortresses of the land of the Hittites (Khatti) no one had previously built, but now all the fortresses of the country I Khantilis have built and the city of Khattusas I Khantilis have built, and this tablet [according to] the words of the stela [have written]. . . .”

The “ building ” must have been a restoration or extension of the city. It will be noticed that Aleppo was “ in the lands of the Kharrians ” (or Murrians) of Mitanni. Many years ago I pointed out that Aleppo and the neighbouring Dunip must have been Mitannian, since in the Tel el-Amarna correspondence the letter of the people of Dunip (KNUDZTON, 59.) contains the Mitannian words *naprillan* and *ammati* “ elders.” Moreover, the names of Dunip (Tennib) and Khalip (Aleppo) which stood on the river Khal terminate in the Mitannian suffix *-p*.

The kings and many of the queens were regarded as incarnations of the Sun-god and were deified after death. Their images were erected in the temples and stated offerings made to them. In this way we have learnt the names of a considerable number of early rulers. Thus a broken tablet (No. 24) describes the offerings of food and drink made to “ 44 (former) kings ” of which the following names remain :—

Alluwamnas and queen Kharabsilis, Khantilis, Zidantas and queen Iyayas, Khuzziyas and queen Summiris, Tudkhaliyas (Tid'al) and queen Nigalmatis, Arnuwandas (I) ; Telibinus, Malku-Arakh “ king of Carchemish,” queen Wallannis, Zidanzas, Mûwatallis (Mutallis I) and Ammunas.

In another list we have : Khattusilis (?) and queen Kassulauiyas, Kantuzzilis and queen Wallannis, Taki-malik and Asmi-malik, Telibinus “ the High-priest,” Malik-Arakh, “ king of Carchemish.” In another list Asmi-malik is stated to be the son of Arnuwandas.

Mutallis (K.T.B.K. No. 4) states that after confirming . . . -malik, the son of Malik-Arakh, in the kingdom of Carchemish, “ I made Rimi-malik the son of Telibinus king in the country of Aleppo, and caused the country of Aleppo to swear obedience to him. Then I set in order the country of Carchemish, and marched out of the country of Carchemish and came to the country of Tegarama. Afterwards I arrived at the city of Tegarama. Nuwanzas, the overseer of the wine-cellars, and all the officers in the city of Tegarama came to me ; they dissuaded me from marching to the city of Khayadas since the year was too advanced, and the officers said to me : ‘ The year is too advanced, so, our lord, do not go to Khayadas.’ Accordingly I did not march to Khayadas, but went to the city of Kharran. The army flocked to me in the city of Kharran, for I had ordered the army to come there.”

Yet another list gives us ; Pu-malik the son of Tudkhaliyas, Pawākhtelmakh, Bimbiras, Ammunas, Khantilis and Alluwamnas, and in various fragments we find : (1) queen Tawannannas and Labarnas, queen Kattusis and Mursilis (I), Bimbiras ; (2) Kantusilis and queen Wallannis, followed by Taki-malik and Asmu-malik ; (3) Telibinus and queen Istapariyas, Alluwamnas and queen Kharabsilis, followed by Khantilis, while elsewhere the queens Dādu-khepa and Khinti. . are coupled with Subbi-luliuma, the founder of the later empire.

Altogether I have recovered the names of the following kings from the various ritual texts :—

Khate-binus (*Hittite Texts in British Museum*, 42, No. 58) ; Wālizanisūs, Takhbiltanus, Walizilis, queen Titi-ūt̄tis, Wāsinzilis and Wakhsis the Kharrian, Ninnassarus, Yaliyas, Telibinus ; Mezzullas of Arinna ; Khasamn̄ilis “ the swordsman ” ; Khasawanzas, Sāuwaskh̄ilas, Khilassiyas ; Zibarwas of Pālā (north-west of the Gulf of Antioch), Kalumziburis, Ilaliyantas ; Ziliburiyas, Takasūkh, Sulinkattis ; Zidkhariyas, Karzis, Khabantaliyas ; Argapas, Alkhisuwas ; Kattiskhabis ; Siwattis, Kuwansas ; Kantuzzilis ; Uriyadus ; Zakhbunas ; Tuskhapadus ; Kurusiyantis, Makhni. ., Khuwatassis ; Khantidasus ; Khebe-malik ; Tessub-gur. To these must be added those of the Labarnas dynasty : Khattusilis I, Mursilis I, Khantilis, Zidantas, Ammunas, Khuzziyas and Telibinus. Telibinus came from Turmitta (Thermodon ?), north of Boghaz Keui, and founded a new dynasty (*Keilschrifturkunden aus Boghazköi*, iv, 1). The names between semi-colons belong to same group and with the exception of the Semitic Khebe-malik, which is compounded, however, with the name of the Kharrian Sun-goddess, are all Proto-Hittite, a language in which *kattis* signified “ king ” and *-silis* “ son of.”

We must also add to the list the name of Biyustis, a contemporary of Anittas, son of Bitkhanas, king of Kussar, who seems to have lived not long after the time of Naram-Sin. Anittas tells us (B.K.T., II, i, p. 9) :—

“ All the country from the city of Zalpu to the sea [I conquered]. Formerly Ukhnas king of Zalpu had taken my god (Khalmasuittum) from the city of Nēsas to Zalpu, but afterwards I, Anittas, the great king, took back my god from Zalpu to Nēsas, and carried Khuzziyas king of Zalpu alive to Nēsas. Now the city of Khattusas Bi[yustis. .]ed ; I annexed it. He subsequently surrendered it. My god Khalmasuittum took it away : I captured it by night by *agreement* (?), and defined its boundaries.

“ Whatever king shall come after me, do you inhabit the city of Khattusas : may Tessub of heaven bless him.”

Zalpu, or Zalba, is often mentioned in the Cappadocian tablets of Kanis (Kara Eyuk), and is coupled with Aleppo, Pālā, Parsukhuntas and Ussû (Issos) in K.T.B.K., IV, p. 71.

A. H. SAYCE.

THE CAVE OF MACPELAH.

THE magnificent work lately issued by Père Vincent and Captain Mackay on *Hebron, le Haram el Khalil*, sets out fully the labours of these workers in 256 pp. 4to, with an album of 28 plates (Paris, Leroux). The production is a credit to the patronage of the Académie des Inscriptions. The former plans are set out, successive alterations of the building are discussed, with the help of eighty-six photographs and detailed drawings in the text, and the records are all quoted at length and compared with the actual site by Père Vincent. Capt. Mackay's plan is most careful in its detail of variations and irregularities, and, happily, is fully supplied with the measurements. The drawings of the pilastered outer wall give some idea of the nobility of its appearance (Fig. 1), and no point of interest seems to have been omitted. We must congratulate Père Vincent on such a monumental work, mainly from his own drawings.

The centre of interest, however, is in the original history of the Mu-kafaleh, or double cave (as named by the LXX), which underlies this great Herodian monument. The subterranean parts were strictly prohibited to the explorers; they were not even allowed inside the Arab cenotaphs on the surface, so our main interest yet remains to be satisfied when the fanaticism of the present population may be less insistent. As the conclusions stated in this work depend on an erroneous reckoning of the mediæval measures, we here reconsider the subject.



To understand the history of the Haram we must begin with the subterranean parts, which were the whole cause of the superstructure. For the chambers and cave now hidden, the only material information is in the careful account of the examination in 1119 A.D. by the monks, which was written up in 1136 by a visitor from the testimony of two who had taken part in the work. This statement is fully published, in the Latin and French translation in the present work, together with every other fragment about the place recorded by pilgrims or historians. The essential parts of the account are that a monk resting by the cenotaph of Isaac found a wind blowing up between the paving slabs. This doubtless came in from the small opening in the outer wall below, where the Jews are permitted now to pray. This led to raising the paving, and finding a pit 11 cubits (7.6 metres, 25 feet) deep; in this account all levels will be quoted as beneath the floor of the Haram area. This measurement raises the question

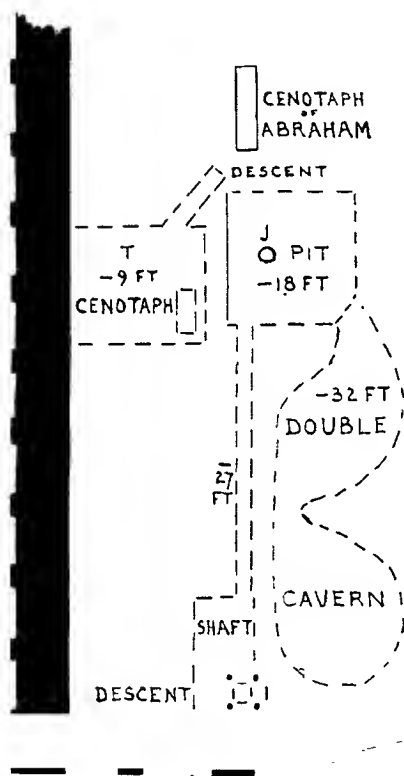
of what was the length of the cubit. Happily, this is fixed in the same document by stating the height of the Haram wall at 18 cubits, limiting it to between $\cdot 67$ and $\cdot 95$ metres, or $26\frac{1}{2}$ and 37 inches, according to whether the back or the front was measured. This is further fixed by the breadth being stated as 49 cubits; this fixes the cubit at $\cdot 695$ metres, or 27·3 inches. In the present work these data have been neglected, and the cubit has been assumed as half a metre; it was really the modern *pic*.

The description of the pit as being near the tomb of Isaac leaves no doubt that it is beneath the mediaeval canopy (I) at the S.E. end of the church (Fig. 2) where paving slabs are secured by iron cramps. The pit was large enough to place in it a double flight of stone stairs in later times. There was no apparent exit from the pit, but by striking the wall a hollow was found, and, breaking away the stone, a passage was opened 11 cubits high (7·6 metres, 25 feet), 17 cubits

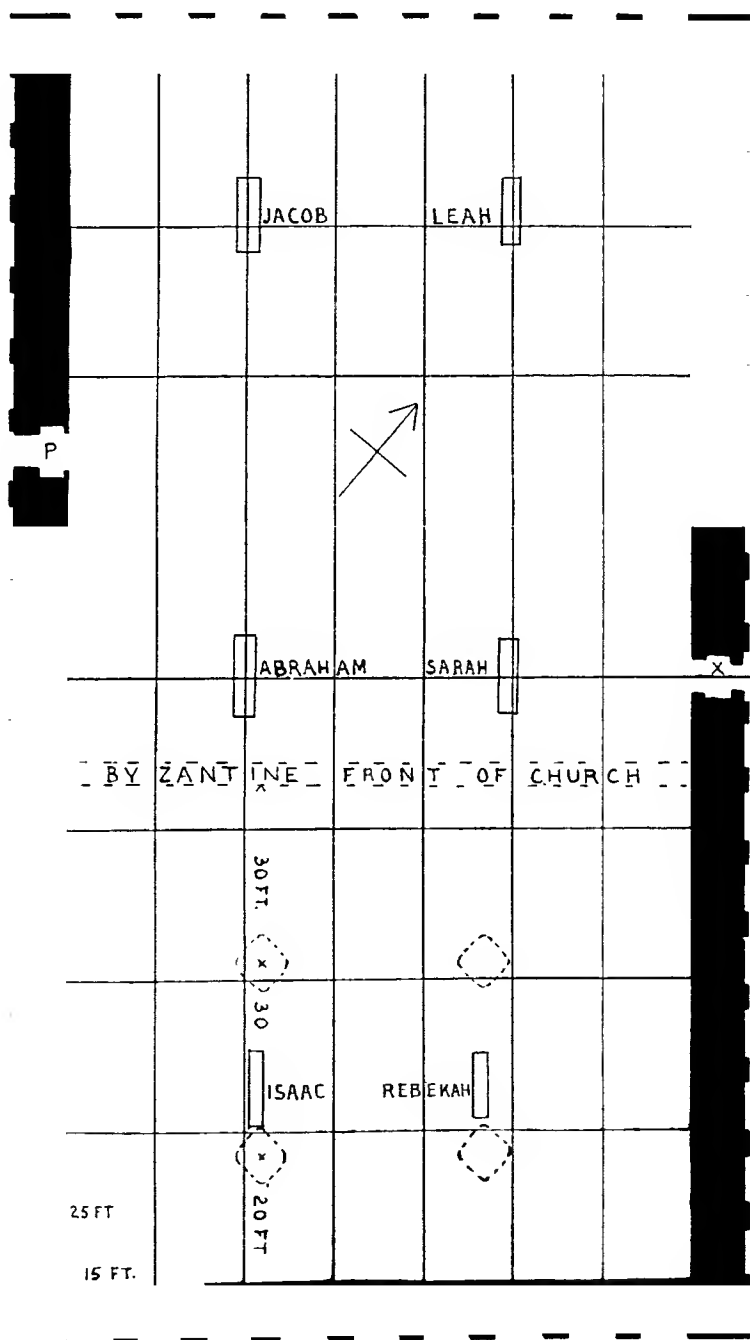
long (11·8 metres, 38 feet), and 1 cubit wide; the stones were like those of the Haram wall. This led to nothing, but by striking the wall a further hollow was found, and they broke into a chamber like a basilica but rounded, probably referring to a vaulted or domed roof. This was large enough to hold 30 persons and was of very fine work. Near the entrance to this hall an inserted stone was found, which closed a natural cave. In this cave bones were found, and an entrance to a second cave, where were also bones and 15 pottery jars full of bones.

To connect this with the visible parts is difficult. There are two clues, perhaps equally wrong. The description of a very narrow and high passage and fine building suggests that it ran along the inner side of the Haram wall; that length cannot be along the S.E. end, but must be along the S.W. side. The other clue is that it led to the vault under the other canopy (J). The length recorded would then imply that the first entrance chamber was nearly as long

as the vault under (J); also that this vault was the "basilica." As it is estimated (by view through an opening at the top) as being over 30 square metres area, that would be fairly in accord with its holding thirty people. Taking either view, it is impossible to suppose that the caverns described as opening near the end of the passage could be on the N.W. of the vault. They must lie off the E. corner of the vault, where some kind of closure was detected in viewing it from above. The floor of the cavern is said to be 14 cubits (9·7 metres, 32 feet) under the floor. This would be 2 metres under the level of the lowest part of the front wall, and probably 6 metres from the surface of the rock at the part indicated. The finely built passage may be the masking wall closing the naturally open front of the cavern. This position of the caverns would make it quite likely that the altar of the Byzantine church was over the inner cavern, thus consecrating it by the relics beneath. This custom seems to have been as early



in the Eastern as in the Western church. It will be seen then that, in any case, the description of the cavern as being entered near the end of the passage puts it quite out of the possibility of being near the N.W. end of the Haram. The cavern indicated in plan and section at pp. 63 and 155 of this volume would be



unlikely. It is double the size of an existing cavern, and would therefore have naturally a much more vaulted roof, while there is nothing to suggest so large a space.

A limit to the arrangements is given by the chamber (T) visited by Capt. Meinertzhagen, from the cenotaph of Abraham. The passage opened off

the S. side of the cenotaph ; it must be longer than in his sketch, and the chamber lower, in order to be beneath the floor. I have reconciled it by supposing a passage 9 feet long, descending 9 feet, and leaving a foot or two for flooring over the chamber. The size of the chamber here would only just lie between the vault (J) and the front wall. It precludes any deeper chamber, like vault (J), being in this position. The chamber was evidently intended to contain a subterranean cenotaph ; perhaps to withdraw attention from the actual caverns below.

The passage described by the monks was a planned mode of access, from the time of the original building. Whether the careful blocking by concealed stones was due to the builders, or was inserted by the Byzantines, we cannot yet say. Certainly the caverns were carefully concealed, and not intended to be visited.

Now we turn to the visible constructions (*see* Fig. 3). It is evident that the disposition of the cenotaphs can have no exact relation to natural caverns ; they are too regular, and they do not accord with the record of the place of the caverns. The crossing lines here drawn over the whole area are placed to show the proportions of the arrangement. It appears probable that the Isaac and Rebekah cenotaphs have been slightly displaced, from a position symmetric with those of Jacob and Leah, by the requirements of the position of columns for the Byzantine church, which were almost certainly in the position of columns of the present church ; these may partly be the original columns with altered capitals. It is clear that the space between the cenotaphs of Abraham and Sarah is to the space beyond them, as 3 : 2 ; this divides the breadth into 7. Lengthways the Jacob and Leah cenotaphs are at a quarter of the distance from the end to the middle, thus dividing the length into 8. Now these spaces are in simple relation to each other ; the length is $8 \times 25 = 200$ Jewish feet, the breadth $7 \times 15 = 105$ Jewish feet, of 10·6 or 10·7 inches. This is the half of the 6-palm cubit, the commonest Jewish measure. The walls are 10 feet thick. A surprise comes, however, when the outside measures are taken, which conform to the Roman foot ; it is 200 Roman feet long, 115 feet wide, walls 9 feet, buttresses 4 feet, and bays 7 feet. The dimensions inside and outside cannot all fit the same standard ; it is Roman to the outer world, Jewish at heart, a type of Herod himself. The design is based on the fact that the Jewish and Roman feet could be worked together on a ratio of 10 : 11 in length, or 11·5 : 12·5 in the breadth, or 9 : 10 in the wall thickness. There is a little cooking in fitting the pilaster and bays on the Roman foot, as the corners ought to be 10 feet on the ends and 9 feet on the sides, yet they were made equal.

How was this grand structure entered ? That the cenotaphs (but not the shrines over them) are parts of the original design is shown by their relation to the inner dimensions. They would hardly have been erected unless to be visited, and they imply some access to the enclosure. The N.E. entrance is exactly in the middle of the side, but it is stated to be clearly a forced hole ; moreover, one would expect that the cenotaphs of the men would be near the entrance and the women behind them. On the S.W. side there is the opening P, which is thus described, "A spacious bay (P) in the old western wall, placed between two pilasters, has not any rigorous symmetry." On the contrary, when we revert to the original scheme of the interior this bay is seen to be exactly between the northern and the middle tombs ; it leads evenly into the wide space between them. It is really ·20 metres too near the northern end, agreeing

to the slightly lesser size of the northern cenotaphs. This position is too precise to be accidental, it clearly belongs to the original design. It is entirely covered by the added building against the side of the Haram, called the tomb of Joseph. How this entrance was reached from outside cannot be settled; whatever existed in front of it was swept away at the building of the shrine. In the section (p. 23), there is marked the "probable place of the primitive door," on the ground level, in the lower chamber which supports the shrine of Joseph; but there does not appear to be any authority for this, and it belongs to a scheme of western caverns for which there does not seem to be any reason.

We thus arrive at the idea that the old entrance of the caverns was masked by a wall, a passage ran along the front from the south to the north, there entering a chamber (J) from which the caverns had an artificial entrance. Over all this a large area was laid out, within a grand enclosure, 194 feet long by 111 feet wide, the wall of which was 30 feet high inside and 55 feet high on the front. This seems undoubtedly to have been one of the constructions of the magnificent Herod. It was closely like his work at Jerusalem, and also like the great tank at Hebron, which is not mentioned in the new account. The mode of access was by a door in the high front about 30 feet from the ground. It may have been reached by a ladder or moveable scaffold; but if there were a permanent entry it must have been all cleared away in making the new shrine. This shrine of Joseph already existed in 1047, when it is said that there was no entry. Yet there is a record that the E. door was made in 918 A.D. Probably it was made when the Joseph shrine covered the earlier entrance; and blocked up again before the visit of 1047.

The great internal change was when a wall was placed across the interior, and nearly half of it converted into a church. The date of this is not fixed, but it was in existence by 570 A.D. It may have been one of the Constantinian foundations, like the basilica at Bethlehem. It was divided by a balustrade into two portions, for Jews and Christians. This recognition of Jews continued for a century after Constantine, as in rather a different degree it is seen in 430 A.D. by the mosaics of the Church of the Circumcision and Church of the Gentiles in St. Sabina at Rome.

A remarkable detail of this church is that the spacing of it is on the same Jewish foot as the lay-out of the whole interior. From the S.E. end to the nearest pillar centre is 20 Jewish feet, thence to the next is 30, and on to the wall is 30 feet more.

During the century after the Arab conquest the shrines were built over the cenotaphs. Those of Abraham and Jacob, octagonal; of Sarah and Leah, hexagonal. The reason for the smaller square shrines of Isaac and Rebekah was doubtless that, as the church had been converted into a mosque, it was desired to avoid blocking it up by such large buildings as the other shrines.

The Crusading kingdom remodelled the church, with slightly pointed arches. The date is not recorded within this period of 1100 to 1187; but probably it was in the earlier part. After Saladin's re-conquest the mosque was emphasized by cutting a *mihrab* in 1332, and as late as 1755 there were porticoes built on two sides of the inner court. Changes are still being made, such as the columns of the Arab tribune (p. 16) being converted into an internal portico along the entrance wall. There is also an evidently modern feature in a gallery running round the nave, at the spring of the roof arches, supported on iron brackets let into the wall, and with a light iron grille front.

So far this splendid building is safe ; we may hope that some day the later accretions may be removed, and let it stand out as the paternal focus of the Jewish race, which alone has any right in the tombs of their patriarchs.

Photographs are given of the lower part of a large building, about a mile N. of Hebron, known as Ramet el Khallil, and it is attributed to Roman work. Certainly it is not Herodian, as there is none of the usual drafting of the joints. The dressing of the blocks is with long strokes of a single-pointed pick ; whereas Roman work is dressed by the claw-tool, or comb-pick, which is first seen at the Parthenon, and is a mark of Roman age in the East. The later lining blocks of the megalith building of Ramet are dressed with a comb-pick, and have remains of inscriptions of the IIIrd century A.D. The great door was 9 feet wide, with sloping sides. It seems impossible to assign this work to the Roman age, and it ought to be easy to clear in and around it and seek for evidence of its history. Some day it will be seized on as a holy place, and then be made inaccessible to research.

FLINDERS PETRIE.

REGNAL YEARS AND CALENDAR YEARS IN EGYPT.

WHEN Mariette made his wonderful discovery of the Serapeum at Memphis and brought to light the steles of the Apis bulls, it was at once perceived that the new material was of enormous importance for the later chronology of the Egyptian kings, and especially for that of the XXVIth dynasty. It is well known that these documents, by giving the dates of birth and death of the bulls expressed in regnal years, together with the length of life of the animals, enable us to calculate, within very close limits, the lengths of the various reigns. About this there was never any room for difference of opinion; but it has been claimed by two recent historians of Ancient Egypt—Prof. Petrie and Prof. Breasted—that the data also prove that the regnal years and the calendar years were assimilated; that is to say, year 2 commenced on the New Year's Day following the king's accession and not on the anniversary of the accession as with a true regnal year. It is hoped to show in this paper that the information conveyed by the Apis steles and by somewhat similar inscriptions referring to the lives of men cannot be made to yield any such conclusion, though the assumption is very probably in accordance with the fact.

It will be convenient first of all to set out for reference in tabular form the data contained in the Apis steles to the end of the XXVIth dynasty.

IN THE XXVIth DYNASTY.

Dealing first with the XXVIth dynasty, we find the view to be here examined expressed by Prof. Petrie thus: "The absence of odd months and days for the lengths of reign (except irregularities)¹ shows that the dates

¹ The irregularities referred to by Prof. Petrie are those resulting from some scribes counting and others not counting the epagomenal days included in the broken period after the last complete year, and also from some omitting and some including the day of birth in the length of life.

Apis.	Date of Birth.			Date of Installation.			Age at Installation.		Date of Death.			Date of Burial.			Age at Death.		
	Y.	M.	D.	Y.	M.	D.	Days.		Y.	M.	D.	Y.	M.	D.	Y.	M.	D.
30	Sheshenq III (II in Gauthier)	28	—	—	Sheshenq III (II in Gauthier)	28	2	1	—	—	—	Panay	...	2	6	1	—
33	Sheshenq IV	11	—	—	Sheshenq IV	12	8	4	—	—	—	Sheshenq IV	37	3	27	(25)	—
37	Taharqa	26	—	—	Taharqa	26	8	9	—	—	—	Psamtek I	21	2	25	21	—
39	Psamtek I	53	6	19	Psamtek I	54	3	12	268	20	12	20	16	4	16	16	7
40	Nekau	16	2	7	Psamtek II	1	11	9	272	16	2	...	...	...	12	10	21
41	Aahmes	5	1	7	Aahmes	5	10	18	281	12	8	...	...	...	23	9	15
										23	7	...	...	...	23	9	15
												Aahmes	...	...	...	18	6

All the figures in the Table are taken from the Apis steles except the ages at installation, which are calculated (see *post*). The months in the dates have, for convenience, been indicated by numbers. For instance, "Psamtek II 1.11.9," means the ninth day of Epiphi in the king's first year, when he had probably reigned no more than a few days; not a *period* of one year, eleven months, and nine days. The numbers assigned to the Apis are those given by Mariette in *Le Sérapéum de Memphis*. The ages in bulls are fixed by length of reigns. The Bibliography will be found in Gauthier, *Le Livre des Rois d'Égypte*, Vol. III, pp. 363, 370, 373 4; Vol. IV, pp. 34, 69 118.

are in fixed months of the year, and that the years were counted from New Year's Day."¹

Prof. Breasted shows us in detail how this result is arrived at. Referring to Apis 39, he writes:—

"This stela furnishes the data for computing the exact length of Psamtik I's reign. Having lived sixteen years seven months and seventeen days, this Apis died in the sixteenth year of Necho, on the sixth of the second month. The bulk of his life fell in the reign of Necho, and he was only one year, six months, and eleven days old at the accession of Necho.² This period of his life thus coincided with the last year, six months and eleven days of Necho's predecessor, Psamtik I. Now, the Apis was born in the fifty-third year of Psamtik I, on the nineteenth of the sixth month; hence the total length of Psamtik I's reign was the sum of

	52	years,	5	months,	19	days
and	1	,,	6	,,	11	,,
	<hr/>					
or	54	years,	0	months,	0	days.

"This would indicate that Psamtik ruled an even number of complete years, but we cannot suppose that Psamtik I died on the last day of the year; it is evident that he died in the fifty-fifth year of his reign, and that the fraction of that incomplete year was, after his death, included in the first year of his successor Necho. It is thus clear that the years of the king's reign in the XXVIth dynasty began on New Year's Day."³

The result of the calculation comes out so neatly at exactly 54 years, without any odd months or days, that the reader is apt at first to assume that the conclusion drawn from it is correct; but in truth there is no connection at all between the arithmetical result arrived at, and the fact which it is supposed to prove. Let us imagine for a moment that the figures which Prof. Breasted discusses belonged to the XVIIIth instead of to the XXVIth dynasty. The figures being the same, and the same method being applied to them, the result must be the same; in other words, we can prove that "the years of the king's reign in the [Eighteenth] dynasty began on New Year's Day." Neither Prof. Breasted nor anyone else would admit this to be true, seeing that we have the clearest evidence that the years of the king at that time were true regnal years, exactly like the years of our English kings. Wherein does the fallacy lie? Clearly in the failure to observe that from the nineteenth of the sixth month in one year to the sixth of the second month in some other year *must* be a period of a certain number of years plus seven months and seventeen days.⁴ The method of counting the king's years has not the smallest bearing on the matter. For the argument to be valid it would be necessary to have a system

¹ *A History of Egypt*, Vol. III, p. 339.

² Prof. Breasted does not say how this figure is reached, and an explanation may make the argument more easy to follow. When the bull died on 16.2.6 of Necho, the king had reigned (assuming an assimilated year) 15 years, 1 month, and 6 days; and this being deducted from the 16 years, 7 months, and 17 days of the bull's life leaves 1 year, 6 months and 11 days. Similarly, when he was born on 53.6.19 of Psamtik I, the king had reigned 52 years, 5 months, and 19 days.

³ *Ancient Records*, Vol. IV, p. 497.

⁴ The bull really lived five days longer, the scribe not having counted the epagomenal days.

of "regnal months" running with the regnal year. Needless to say, the complications arising out of a regnal year distinct from the calendar year were not rendered still more troublesome by the use of "regnal months." The 1st January of the thirteenth year of George V means the 1st January, 1923, not the first day of King George's thirteenth year. Similarly in Egypt, the first of the first month meant the first day of the *calendar* year, no matter where it might happen to fall in the regnal year. Therefore the only possible difference in calculating a period of time by the calendar year and by the regnal year is in the number of *years*.

The argument may be further illustrated by a consideration of the famous Obelisk Inscription of Queen Hatshepsut.¹ In this we are told that the work on the obelisk occupied from the first of the sixth month in the fifteenth year to the thirtieth of the twelfth month in the sixteenth year, "making seven months." From this statement we see that the work was proceeding during the last seven months of a calendar year; and, as these seven months were divided between two regnal years, it is clear that the queen used a true regnal year commencing at some time between the second of the sixth month and the thirtieth of the twelfth month (both inclusive). It should be noted, however, that, while the fact of the regnal year changing within this period proves that it was not assimilated to the calendar year, the fact that it did not change within these seven months would not have proved that it was. Since there are many other days on which it might have changed besides New Year's Day, the assimilation would be a possibility merely. Let us suppose now that we had the text as it stands, but with the omission of the statement that the time occupied was seven months. There would then be two possible views (and two only). Either the whole period was comprised within one calendar year, and therefore amounted to seven months; or it commenced in one calendar year and finished in the next, and therefore amounted to *one year* and seven months. To state the conclusion as a general proposition, if we are dealing with dates expressed in regnal years, and do not know when the regnal year commenced, we *may* be a year wrong in our estimate of the time between any two days, but we shall not be wrong as to the odd months and days.

It by no means follows, however, from the foregoing argument that the regnal years of the XXVIth dynasty were *not* assimilated to the calendar years, and there is a very great probability that they *were*. Indeed, if there had been evidence for the period similar to that for the XVIIIth and XIXth dynasties, the argument we have criticised could hardly have been put forward at all. We proceed, then, to a consideration of the chronological data in detail.

(1) Apis 37 died on 20.12.20, and was buried on 21.2.25 of Psamtek I. There being a regular interval of seventy days between the death and burial of an Apis, we know that the second date must have been in the *calendar* year immediately following the death. Therefore the regnal year changed between 12.20 and 2.25.

(2) Apis 41 was born on 5.1.7 and installed on 5.10.18 of Aähhmes. These dates, being necessarily in the same calendar year, prove that the regnal year did not change between 1.7 and 10.18, and therefore must have changed between 10.19 and 1.6 (both inclusive).

(3) Psamtek III must have had a very short reign (six months according to Manetho), and yet the only dated document of his time is of the fifth month

¹ Gauthier, *Livre des Rois*, Vol. II, p. 238.

of the *second* year.¹ The obvious explanation is that he came to the throne late in the calendar year, and commenced to count his second year from the following New Year's Day.

(4) A difficulty is introduced by the stele of the third year of Aāhmes, recounting his conflict with the dethroned Apries.² Line 1 of this document commences with the date 3.10 (without day), while line 14 commences with the date 3.3.8. If, as has been hitherto assumed, the second date is later in time than the first, the regnal year could not have changed between 10.19 and 1.6, as it must have done according to the evidence cited in (2). It has been proposed to explain the contradiction by supposing that the assimilation of the regnal and calendar years was adopted by the people for practical convenience, but was not followed in state records. This seems to be altogether too modern a view. From the Egyptian standpoint, it is likely that the Apis steles were just as much state documents as the stele of the year 3.³ It may be suggested that the real solution is that the date 3.10 is that of the making of the stele, and therefore *followed* 3.3.8. The fact that no day is specified strongly supports this view, as the making of a stele could not well be attributed to any precise day.⁴ The famous Piankhy stele commences with a date that contains no day, and later has specific dates, exactly like the stele under discussion; and various opinions have been held as to the significance of the first date.⁵ Doubtless in both cases the opening date is that of the making of the stele.

IN THE XXIIND TO XXVTH DYNASTIES.

Unfortunately, the Apis steles do not give us the same amount of information for the period preceding the XXVIth dynasty, but what there is tends to show that the system of counting by true regnal years continued to the end of the XXVth dynasty. A reference to the table above shows that Apis 39 was installed at the age of 268 days, Apis 40 at 272 days, and Apis 41 at 281 days, an average age of 275 days.⁶ We do not know the age at which the first three Apises in the table were installed, but we may reasonably suppose that it was somewhere near the 275 days indicated by the later information. If this be so, the Apis installed on 28.2.1 of Sheshenq III was born about 28.5.1; and that installed on 26.8.9 of Taharqa was born about 26.11.9.⁷ As, therefore, in both cases the animal must have been born in the calendar year before the installation, while birth and installation were in the same regnal year, the latter was not assimilated to the calendar year.

¹ Gauthier, *loc. cit.*, Vol. IV, p. 131.

² Gauthier, *loc. cit.*, Vol. IV., p. 114.

³ It will be seen later that there is good ground for believing that the assimilation came in with the XXVIth dynasty and therefore almost certainly by royal authority.

⁴ It has been contended that when a month is written without specifying a day, the *first* day of the month is meant. This may be true in some cases, but is hardly likely to be so always.

⁵ Gauthier, *Livre des Rois*, Vol. IV, p. 2.

⁶ In the case of Apises 39 and 40 the age *might* have been one year more; for Apis 41 only can we be certain of the exact interval between birth and installation. It is sufficient for the argument that the bulls were *not less* than the ages given above.

⁷ Apis 33 was born in the regnal year preceding his installation, which is consistent with either system of reckoning the regnal years.

To sum up, the Apis steles afford no conclusive evidence for either period. But, as the whole of the data for the XXVIth dynasty (with one easily explicable exception) are at the least consistent with an assimilated regnal year, while the data for the preceding period are apparently inconsistent with it, we may conclude that the assimilated year was introduced by Psamtek I.

F. W. READ.

REVIEW.

Academie des Inscriptions. Comptes Rendus, 1923, Mars-Avril.

Fouilles de Byblos.—A little sketch plan is given of the temple site as far as uncovered. The entrance was between two columns 7 feet apart. Before them are on one side the bases of three seated figures, and on the other side the base of a statue. Entering a hall, there is on one hand a large oval tank, 23 by 20 feet; on the other side is a space with remains of statuary. So far there is no dating for these remains.

A site a hundred feet away is that of the so-called Phoenician temple. Here two columns are 15 feet apart. Under the pavement was a jar in the ground in the line of the axis between the columns; it was half full of beads of carnelian, crystal, glaze, bronze, silver and gold, which formed collars. On one bead is "Life of Ra" in hieroglyphics. Many rings were found with bezels of carnelian, crystal, bronze, bone and soft stone; more than a hundred scarabs were also set, cut in carnelian, crystal and bone. There were eight diadems, one silver and seven bronze, bands with bosses. A hundred clothes-pins, with a hole through the middle to tie them on (*Tools and Weapons*, lxii, N 14-18), accompanied a hundred rings of wire, 2 to 4 inches across, which it is supposed served to pull clothing through before pinning it. A disc of gold is ornamented with filigraïn work, in circles and crescents. There were also a silver cup, two cups and two vases of bronze, and many statuettes in stone, bone and bronze (? copper). Three small cylinders of stone are engraved in Cypriote style. A small plaque has hieroglyphs of the "sealer of Horus of the south and north" (Horus and Set). There were also two other foundation deposits, with vases of Pepy I, a vase of Pepy II in the form of a baboon with young, "discs of offerings" in alabaster and breccia, blue paste figure of baboon, quartz gaming pieces, a little gold sistrum, a copper chisel, votive axes of polished stone and flint knives. All of these should be published as soon as possible, for, being grouped in three deposits, they are of similar age and any one will serve to date the rest. It is a discovery which may be the foundation of Syrian archaeology if it is properly utilised. Above the pavement were many fragments of Egyptian sculpture, a head in basalt, the point of an obelisk, a cartouche of Usarkon and other fragments. The whole work seems to be carried on in a slow and insufficient manner, and the account is vague and without any dating by style or precise statement of character.

NOTES AND NEWS.

THE work of the British School at Qau will be continued this winter, especially the search for the source of the most ancient human remains which were found last season. The cemetery where the oldest Coptic MS. of St. John's Gospel was found will be completely explored, and the prehistoric cemeteries to the north will be worked in the hope of finding more of the strange group of ripple pottery and its associated styles. For this there will be a large party of workers. Mr. and Mrs. Brunton, M. Bach and Mr. Starkey have left already; the Director leaves at once, with Mr. Greenlees, Lieutenant Wheeler, and Mr. Yeivin; Mrs. Benson is also taking up work at the camp; Miss Caton Thompson comes as a student of the School, after her work at Cambridge, to deal with the palaeolithic remains. Lady Petrie is detained in London, but will continue working for the increased support required for these excavations.

The papyrus of the Gospel of St. John has been completely opened, photographed and mounted. It will be placed in the collection of the British and Foreign Bible Society, in Queen Victoria Street; in return for this a donation has been given which will provide for the complete publication of full-sized photograph of the 84 pages, transcription in Coptic type, and discussion of the results. As it is not only the oldest Biblical Coptic MS., but is older than any Greek MS. of the Gospel except the Vaticanus, it will be of great textual value. The fine writing of it shows that it was carefully transcribed. We are most fortunate to have enlisted the help of Sir Herbert Thompson to edit and discuss the text. The volume will be issued as the second volume of this year to all regular subscribers of two guineas.

The scale of work of the School involves heavy expense for travelling—about £700 yearly—owing to the great rise of fares. This, and collateral expenses, are all needful before the cost of excavating and transport can be dealt with. It is only by an increase of subscribers for the volumes of publications that such heavy costs can be met.

At the Tombs of the Kings, Mr. Carter, Mr. Mace, and their assistants are dealing with the very difficult problems of managing the vast treasure house of Tutankhamen.

Mr. Griffith and Mr. Newton are at Tell el Amarna, to carry on the excavations of the Egypt Exploration Society.

All Europeans in the Egyptian Government service are to leave by 1926, and therefore the English Inspectors will retire, and the monuments be left entirely to native protection. The recent letters of Sir Martin Conway in *The Times* are not reassuring as to the future of the treasures of Egypt.

The Palestine Exploration Fund has undertaken important work at Jerusalem, clearing part of Mount Ophel, south of the Temple area. Prof. Macalister and Mr. Duncan are carrying on the excavations.

The work at Kish is progressing under Captain Mackay.

In the review, p. 87, of Mr. Kendrick's Catalogue, No. 780 should be stated correctly described, but two blocks were transposed by the printer.



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